



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

HARVARD LAW LIBRARY



3 2044 032 353 047

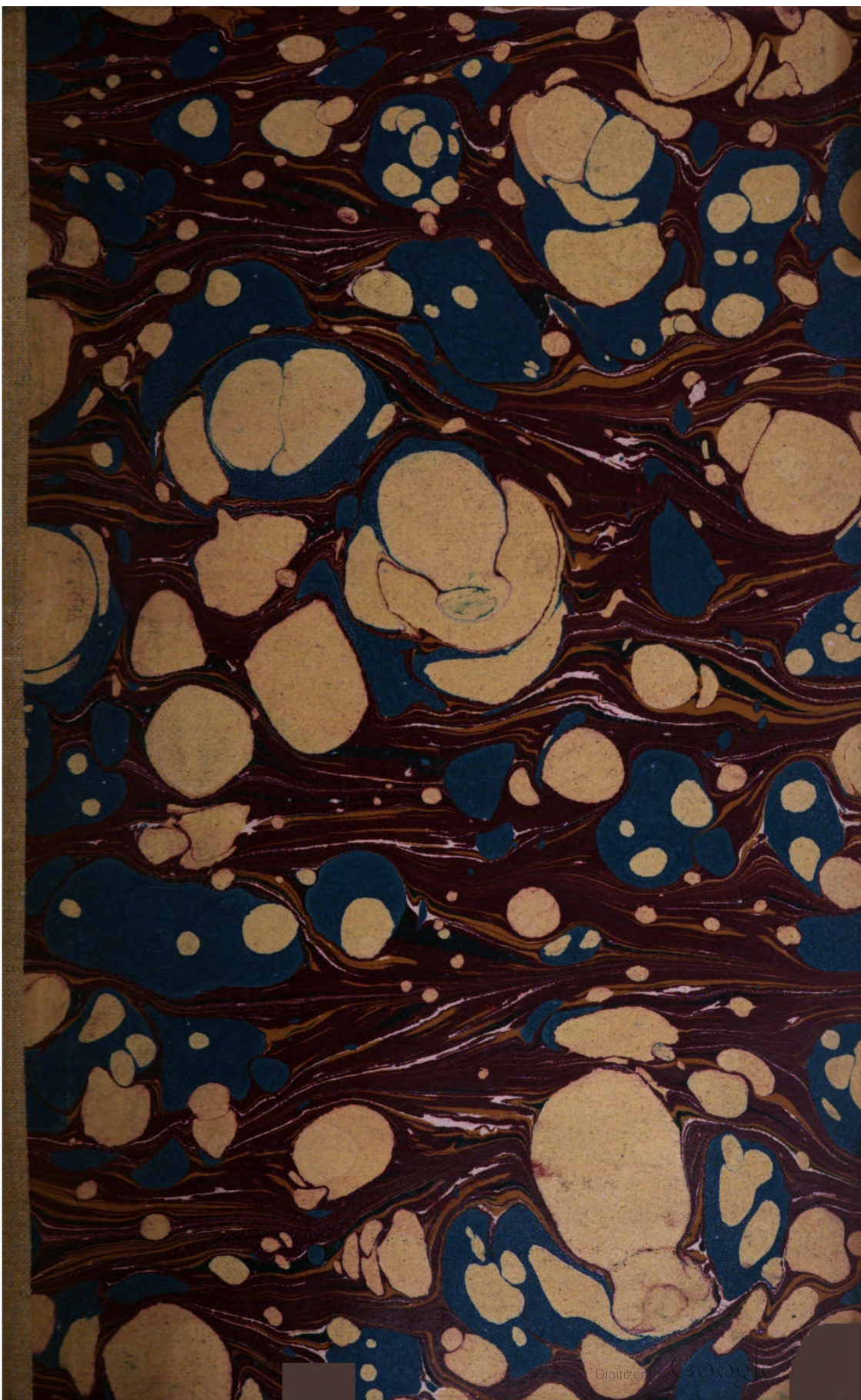
L



HARVARD LAW LIBRARY.

Received *Oct. 1, 1903.*















**THE LAW**  
**RELATING TO**  
**ELECTRIC LIGHTING, TRACTION**  
**AND POWER.**



*BY THE SAME AUTHOR.*

---

Published 1901. Price, 35s.; for Cash, Post Free, 28s. 8d.

---

**MICHAEL AND WILL ON THE LAW  
RELATING TO GAS AND WATER.  
Fifth Edition. By JOHN SHIRESS  
WILL, K.C.**

"Has long been recognised as the Standard Work."—*Gas World*.

"It is a Standard Law Book and something more."—*Solicitors' Journal*.

---

**BUTTERWORTH & CO.,  
12, BELL YARD, TEMPLE BAR, W.C.**

6  
c f

THE LAW

RELATING TO

ELECTRIC LIGHTING,  
TRACTION AND POWER.

THIRD EDITION.

BY  
JOHN SHIRESS WILL,

*One of His Majesty's Counsel.*

JOINT AUTHOR OF

"MICHAEL AND WILL ON THE LAW RELATING TO GAS AND WATER."

o

LONDON:  
BUTTERWORTH & CO., 12, BELL YARD, TEMPLE BAR, W.C.  
Law Publishers.

1903.

5  
u/k  
951  
4.2



Tx  
W689  
ed3

BRADBURY, AGNEW, & CO. LD., PRINTERS,  
LONDON AND TONBRIDGE.

*Rec. Oct. 1, 1903.*

## PREFACE TO THE THIRD EDITION.

---

THIS work, first published in 1898, has hitherto dealt with the law relating to Electric Lighting only. Since that time rapid developments have been made in the application of electrical energy to the working of "Tube" and other Railways, Tramways and Light Railways, and to the supply of Power. In preparing this Third Edition opportunity has been taken to extend the scope of the work so as to embrace Traction and Power.

Part I. contains a general view of the Legislation of the last twenty years on the subject of Electric Lighting. This is intended to serve as a guide to the more detailed consideration of the various Acts of Parliament, and the practice which has grown up round them.

Part II. brings together the various Electric Lighting Acts from 1882 to 1902; the Board of Trade Rules with respect to applications for Provisional Orders for Electric Lighting; and the Regulations made by the Board of Trade, with the authority of Parliament, for securing the safety of the public and for insuring a proper and sufficient supply of electrical energy for lighting purposes. A separate chapter has been introduced under the heading of "County of London," so as to bring together many important matters, such as the points in which a County of London Provisional Order differs from other Provisional Orders, the question of competition and overlapping of areas of



supply in the County of London, the establishment of Testing Stations by the London County Council, the protection of theatres and places of public resort from fire, the London Overhead Wires Act, 1891, and the impending revision of boundaries consequent upon the passing of the London Government Act, 1899, and the Orders in Council authorised by and made under the provisions of that Act.

Part III. deals with Leakage and Electrolysis, Traction and Power. In regard to Leakage and alleged consequent damage by electrolytic action, Parliament and the Board of Trade have taken careful steps to provide against damage being so caused—the former by the appointment of a Joint Committee of both Houses, and the latter by the revision from time to time, as occasion has required, of the “Model Clause,” originally recommended by the Joint Committee, and now inserted in all Acts and Orders relating to the use of electrical energy, except in those cases where the same purpose is effected by other means, as to which see *post*, p. 368. Nevertheless, during the last three Sessions of Parliament opponents have frequently challenged the sufficiency of the protection afforded. In some instances they have been successful in obtaining some further protection, and in others it has been held that the protection of the Model Clause is sufficient. In the chapter on this subject the various steps taken by Parliament and by the Board of Trade, the various decisions of Private Bill Committees, and all precedents, are collected down to the end of the last Session of Parliament.

The systems which generally come under consideration of working Tramways and Light Railways by electrical

power are three—viz., the overhead trolley system, the underground conduit system, and the surface contact system. Of these the first is that chiefly in use. The Regulations which the Board of Trade have prescribed in regard to each of these systems will be found in their places.

The number of "Tube" and other Railways authorised to be worked by electricity is rapidly increasing. From a list which appears at p. 403, there are at least twenty-nine. Many others are in contemplation. In regard to the Tube Railways the powers usually conferred by Parliament are dealt with, including the power of compulsorily taking land and easements under private land and public streets, and the obligation—for the first time introduced in the Session of 1902 in the case of new lines—to make compensation for injuriously affecting any land, house, or building, by reason of the working of the railway; provided the claim be made within two years from the opening of the railway. A form of Board of Trade Regulations applicable to Tube Railways is inserted.

As to the Power Acts, the number passed into law down to the last Session of Parliament is fifteen. Besides these, there are many private Acts authorising electric lighting or electric traction which also specially authorise the supply of power. Indeed, as pointed out (see *post*, p. 88) by the late Sir Courtenay Boyle, K.C.B., in his evidence before the Committee on Municipal Trading in 1900, the authority conferred by a Provisional Order in the ordinary form to supply electrical energy for "private purposes" includes the supply of power. The Power Acts, specially so-called, are substantially identical in form, but differ much in details.

To Mr. Harry Booth, of the Board of Trade, the author has to express his great indebtedness on the occasion of this edition, as in the case of the former editions, for information kindly afforded from time to time in connection with Electric Lighting and Power.

The author's acknowledgments are also due to Mr. P. H. Thomas, I.S.O., of the Board of Trade, for his kindness in supplying information in regard to the Regulations and requirements of the Board of Trade in connection with Electric Traction.

J. SHIRESS WILL.

2, GARDEN COURT, TEMPLE, E.C.,

*February, 1903.*

## TABLE OF ABBREVIATIONS.

---

A. -G.	Attorney-General.
B. of W.	Board of Works.
Co.	Company.
Corp.	Corporation.
C. C.	County Council.
D. C.	District Council.
E. L. Co.	Electric Lighting Co. or Electric Light Co.
<i>El. Rev.</i>	<i>Electrical Review.</i>
E. S.	Electric Supply.
E. S. Co.	Electric Supply Company.
<i>Jl. of G. L.</i>	<i>Journal of Gas Lighting and Water Supply.</i>
L. B.	Local Board.
Parly. paper	Parliamentary paper.
Rail. Co.	Railway Company.
R. D. C.	Rural District Council.
U. D. C.	Urban District Council.





# TABLE OF CONTENTS.

	PAGE
PREFACE .....	v
TABLE OF ABBREVIATIONS .....	ix
TABLE OF CONTENTS .....	xi
TABLE OF CASES.....	xv
TABLE OF STATUTES .....	xxiii

## PART I.

GENERAL VIEW OF THE LEGISLATION RELATING TO ELECTRIC LIGHTING .....	5
SYNOPSIS OF PART I.....	3—4

## PART II.

### ELECTRIC LIGHTING ACTS, BOARD OF TRADE RULES AND REGULATIONS, &c.

ARRANGEMENT OF THE SECTIONS OF THE VARIOUS ACTS .....	83—87
ELECTRIC LIGHTING ACT, 1882.....	88
"        "        "    1888.....	144
"        "        (SCOTLAND) ACT, 1890.....	151
"        "        "        "    1902.....	153
"        "        (CLAUSES) ACT, 1899.....	154
SCHEDULE THERETO .....	155—211
APPENDIX OF INCORPORATED SECTIONS .....	211
FORM OF PROVISIONAL ORDER .....	231
BOARD OF TRADE RULES WITH RESPECT TO APPLICATIONS FOR PROVISIONAL ORDER .....	235

	PAGE
BOARD OF TRADE REGULATIONS A. & B., FOR SECURING THE SAFETY OF THE PUBLIC AND FOR ENSURING A PROPER AND SUFFICIENT SUPPLY OF ELECTRICAL ENERGY .....	243
BOARD OF TRADE REGULATIONS (NON-STATUTORY UNDERTAKINGS) .....	261
BYELAWS OF LOCAL AUTHORITIES UNDER PUBLIC HEALTH ACTS AMENDMENT ACT, 1890 (ADOPTIVE) .....	271
FORM OF ACCOUNTS FOR LOCAL AUTHORITIES .....	274—281
” ” FOR COMPANIES .....	282—291
ORDER IN COUNCIL AS TO NEW DENOMINATIONS OF STANDARDS FOR MEASUREMENT OF ELECTRICITY .....	292
BOARD OF TRADE ELECTRICAL STANDARDIZING LABORATORY .....	298
COUNTY OF LONDON.....	303
(I.) POINTS IN WHICH A COUNTY OF LONDON PROVISIONAL ORDER DIFFERS FROM OTHER PROVISIONAL ORDERS .....	303
(II.) COMPETITION AND OVERLAPPING IN THE COUNTY OF LONDON .....	306
(III.) ESTABLISHMENT OF TESTING STATIONS BY THE LONDON COUNTY COUNCIL .....	312
RULES MADE.....	312
(IV.) PROTECTION OF THEATRES, &c., FROM FIRE	315
ACT GIVING AUTHORITY .....	315—316
REGULATIONS MADE .....	316
(V.) LONDON OVERHEAD WIRES .....	325
ACT OF 1891.....	325
BYELAWS MADE .....	332
(VI.) ELECTRIC LIGHTING (LONDON) BILLS OF SESSIONS 1901 AND 1902 AS TO BOUNDARIES	334
LOCAL GOVERNMENT BOARD CIRCULAR RELATIVE THERE TO .....	334

## PART III.

### ELECTROLYSIS, TRACTION AND POWER.

I. LEAKAGE AND ELECTROLYSIS .....	339
II. TRAMWAYS AND LIGHT RAILWAYS .....	374
1. TRAMWAYS WORKED BY ELECTRICAL POWER .....	374
REGULATIONS MADE BY BOARD OF TRADE ..	377, 381, 383, 388, 392

<b>TABLE OF CONTENTS.</b>		<b>xiii</b>
		<b>PAGE</b>
<b>2. LIGHT RAILWAYS WORKED BY ELECTRICAL POWER .....</b>		<b>397</b>
<b>REGULATIONS MADE BY BOARD OF TRADE ..</b>		<b>400</b>
<b>3. RETURN OF ACCIDENTS BY TRAMWAYS AND LIGHT RAILWAYS TO BOARD OF TRADE .....</b>		<b>400</b>
<b>III. TUBE AND OTHER RAILWAYS AUTHORISED TO BE WORKED BY ELECTRICAL POWER...</b>		<b>408</b>
<b>1. THE VARIOUS COMPANIES SO AUTHORISED</b>		<b>408</b>
<b>2. POWERS USUALLY CONFERRED BY TUBE RAILWAY ACTS .....</b>		<b>418</b>
<b>3. REGULATIONS MADE BY THE BOARD OF TRADE .....</b>		<b>430</b>
<b>IV. POWER ACTS.....</b>		<b>438</b>
<b>GENERAL INDEX.....</b>		<b>449</b>



## TABLE OF CASES.

[The page at which a case is fully referred to is printed in thick type.]

	PAGE
<b>Allred v. West Metropolitan Tramways Co.</b> , [1891] 2 Q. B. 398; 60 L. J. Q. B. 631; 65 L. T. 188; 89 W. R. 609; 55 J. P. 824; 7 T. L. E. 609 .....	174
<b>Alliance and Dublin Consumers Gas Co. v. Dublin C. C.</b> , [1901] 1 Ir. R. 492...	222
<b>Ambler &amp; Sons, Ltd. v. Bradford Corp.</b> , [1902] 2 Ch. 585; 71 L. J. Ch. 744; 87 L. T. 217; 66 J. P. 708; 18 T. L. R. 758.....	51
<b>Atkinson v. Newcastle Waterworks Co.</b> (1877), 2 Ex. D. 441; 46 L. J. Ex. 775; 36 L. T. 761; 25 W. R. 794 .....	237
<b>A.-G. v. Cambridge Consumers Gas Co.</b> (1868), L. R. 4 Ch. 71; 38 L. J. Ch. 94; 19 L. T. 508; 17 W. R. 145 .....	213
<b>A.-G. v. Eastbourne Corp.</b> , [1902] 1 K. B. 403; 71 L. J. K. B. 181; 85 L. T. 745; 50 W. R. 161; 66 J. P. 36; 18 T. L. R. 122 .....	146
<b>A.-G. v. Edison Telephone Co.</b> (1880), 6 Q. B. D. 244; 50 L. J. Q. B. 145; 43 L. T. 697; 29 W. R. 428 .....	134
<b>A.-G. v. National Telephone Co.</b> , <i>Electrician</i> , July 20th, 1900, p. 492; July 27th, 1900, p. 581; Nov. 16th, 1900, p. 137.....	219
<b>A.-G. v. Sheffield Gas Consumers Co.</b> (1853), 3 De G. M. & G. 304; 22 L. J. Ch. 811; 17 Jur. 677; 1 W. R. 185 .....	213
<b>A.-G. v. United Kingdom Electric Telegraph Co.</b> (1861), 30 Beav. 287; 31 L. J. Ch. 329; 8 Jur. (N.S.) 583; 5 L. T. 338; 10 W. R. 167 .....	215
<b>Ayr Harbour Trustees v. Oswald</b> (1883), 8 App. Cas. 623 .....	226
<b>Baker, Lees &amp; Co.</b> , <i>In re</i> , W. N., [1902] 229.....	97
<b>Barnett v. Poplar, Mayor, &amp;c.</b> , [1901] 2 K. B. 319; 70 L. J. K. B. 698; 84 L. T. 845; 49 W. R. 574 .....	174
<b>Battersea Vestry v. County of London and Brush Provincial E. L. Co.</b> , [1899] 1 Ch. 474; 68 L. J. Ch. 238; 80 L. T. 81; 15 T. L. R. 175 .....	215
<b>Belmore, Countess of, v. Kent C. C.</b> , [1901] 1 Ch. 873; 70 L. J. Ch. 501; 84 L. T. 523; 49 W. R. 459; 65 J. P. 456; 17 T. L. R. 360 .....	213
<b>Bennett v. Aird</b> , <i>Jl. of G. L.</i> , October 17th, 1899, p. 945; Oct. 31st, 1899, p. 1,067.....	221
<b>Berry, Ex parte, Flack, In re</b> , [1900] 2 Q. B. 32; 69 L. J. Q. B. 458; 82 L. T. 503; 48 W. R. 446; 7 Manson, 141 .....	121
<b>Black v. Christchurch Finance Co.</b> , [1894] A. C. 48; 6 R. 394; 63 L. J. P. C. 32; 70 L. T. 77; 58 J. P. 332 .....	220
<b>Bournemouth Commissioners v. Watts</b> (1884), 14 Q. B. D. 87; 54 L. J. Q. B. 93; 51 L. T. 823; 33 W. R. 230; 49 J. P. 102; 1 T. L. R. 142 .....	103
<b>Bradford Corp. v. Pickles</b> , [1895] A. C. 587; 64 L. J. Ch. 759; 73 L. T. 353; 44 W. R. 190; 60 J. P. 3; 11 R. 236; 11 T. L. R. 108, 555 .....	215
<b>Brand v. Hammersmith, &amp;c., Rail. Co.</b> (1868), L. R. 4 H. L. 171; 38 L. J. Q. B. 265; 21 L. T. 238; 18 W. R. 12 .....	19
<b>Bristol Tramways and Carriage Co. v. National Telephone Co.</b> , [1899] 2 Ch. 282; 68 L. J. Ch. 566; 80 L. T. 836; 63 J. P. 583; 15 T. L. R. 430 ...	221
<b>British Electric Traction Co. v. Commissioners of Inland Revenue</b> , [1902] 1 K. B. 441; 71 L. J. K. B. 92; 85 L. T. 663; 50 W. R. 280; 66 J. P. 83; 18 T. L. R. 105 .....	104



	PAGE
British Insulated Wire Co. v. Prescott U. D. C., [1895] 2 Q. B. 463, 538; 65 L. J. Q. B. 190; 15 R. 633, 636 n.; 73 L. T. 383; 44 W. R. 224; 59 J. P. 552; 11 T. L. R. 595 .....	103
Brooks v. Torquay Corp. and Newton Abbot R. D. C., [1902] 1 K. B. 601; 71 L. J. K. B. 109; 85 L. T. 785; 66 J. P. 298; 18 T. L. R. 189.....	103
Chaplin v. Westminster, Mayor, [1901] 2 Ch. 329; 70 L. J. Ch. 679; 85 L. T. 88; 49 W. R. 586; 65 J. P. 661; 17 T. L. R. 576 .....	224
Charing Cross and Strand E. S. Corp., <i>In re, Electrician</i> , Feb. 14th, 1902, p. 637; <i>El. Rev.</i> , Feb. 14th, 1902, p. 254 .....	167
City of London E. L. Co. v. London Corp., [1901] 1 Ch. 602; 70 L. J. Ch. 334; 84 L. T. 170; 49 W. R. 306; 65 J. P. 563; 17 T. L. R. 294 .....	104
City of London E. L. Co. v. Oakley, <i>Times</i> , Nov. 12th, 1902; <i>Electrician</i> , Nov. 14th, 1902, p. 158; <i>El. Rev.</i> , Nov. 14th, 1902, p. 817; <i>Jl. of G. L.</i> Nov. 18th, 1902, p. 1,332.....	198
Clarke's Settlement, <i>In re</i> , [1902] 2 Ch. 327; 71 L. J. Ch. 593; 86 L. T. 658; 50 W. R. 585; 18 T. L. R. 611 .....	54
Colne Valley Water Co. v. Bretherton, <i>Jl. of G. L.</i> , May 20th, 1902, p. 1,364 .....	222
Colombo Gas and Water Co., Ltd., <i>Jl. of G. L.</i> , July 20th, 1896, p. 179 .....	94
Commercial Gas Co. v. Scott (1875), L. R. 10 Q. B. 400; 44 L. J. M. C. 171; 32 L. T. 765; 23 W. R. 874 .....	88
Coverdale v. Charlton (1878), 4 Q. B. D. 104; 48 L. J. Q. B. 128; 40 L. T. 88; 27 W. R. 257 .....	110
Crawford (on behalf of London Corp.) v. City of London E. L. Co. (1898), 67 L. J. Q. B. 942; 78 L. T. 841; 47 W. R. 45.....	196
Cristofer v. National Telephone Co., <i>Electrician</i> , Dec. 9th, 1898, p. 240.....	111, 325
Crystal Palace Gas Co. v. Idris (1900), 82 L. T. 200; 64 J. P. 452; 16 T. L. R. 180.....	228
Curtis v. Embery (1872), L. R. 7 Ex. 369; 42 L. J. M. C. 39; 21 W. R. 143 .....	224
Curtis v. Kesteven C. C. (1890), 45 Ch. D. 504; 60 L. J. Ch. 103; 63 L. T. 543; 39 W. R. 199 .....	213
Dudley Gasworks Co. v. Warmington (1881), 50 L. J. M. C. 69; 44 L. T. 475; 29 W. R. 680; 45 J. P. 649 .....	88, 184
Eastern and South African Telegraph Co. v. Capetown Tramways Co., [1902] A. C. 381; 71 L. J. P. C. 122; 86 L. T. 457; 50 W. R. 657; 18 T. L. R. 523.....	370
East Molesey L. B. v. Lambeth Waterworks Co., [1892] 3 Ch. 289; 62 L. J. Ch. 82; 2 R. 88; 67 L. T. 493 .....	169, 225
Edgware Highway Board v. Colne Valley Water Co. (1877), 46 L. J. Ch. 889 .....	169, 225
Edgware Highway Board v. Harrow District Gas Co. (1874), L. R. 10 Q. B. 92; 44 L. J. Q. B. 1; 31 L. T. 402; 23 W. R. 90 .....	213
Edmondson v. Longton Corp. (1902), 19 T. L. R. 15 .....	30
Ellis v. Sheffield Gas Consumers Co. (1858), 2 E. & B. 767; 28 L. J. Q. B. 42; 2 C. L. R. 249; 18 Jur. 146; 2 W. R. 19 .....	219
Elphinstone v. Monkland Iron and Coal Co. (1886), 11 App. Cas. 382; 35 W. R. 17 .....	120
Fareham L. B. and Fareham E. L. Co. v. Smith, W. N., [1891] 76; 7 T. L. R. 443.....	216
Farmer v. Waterloo and City Rail. Co., [1895] 1 Ch. 527; 64 L. J. Ch. 338; 13 R. 306; 72 L. T. 225; 43 W. R. 363; 59 J. P. 295; 11 T. L. R. 210 .....	419
Fenwick v. East London Rail. Co. (1875), L. R. 20 Eq. 544; 44 L. J. Ch. 602; 23 W. R. 901 .....	115

## TABLE OF CASES.

xvii

	PAGE
<i>Ferens v. O'Brien</i> (1883), 11 Q. B. D. 21; 52 L. J. M. C. 70; 31 W. R. 643; 15 Cox, C. C. 332; 47 J. P. 472 .....	121
<i>Fidler v. Electrical Power Distribution Co., Ltd.</i> , <i>El. Rev.</i> , July 25th, 1902, p. 139	174
<i>Fielden v. Morley Corp.</i> , [1900] A. C. 133; 69 L. J. Ch. 314; 82 L. T. 29; 48 W. R. 545; 64 J. P. 484; 16 T. L. R. 219 .....	51
<i>Fielding v. Morley Corp.</i> See <i>sub nom.</i> <i>Fielden v. Morley Corp.</i>	
<i>Finchley E. L. Co., Ltd. v. Finchley U. D. C.</i> , [1902] 1 Ch. 866; 71 L. J. Ch. 450; 86 L. T. 286; 50 W. R. 470; 66 J. P. 502; 18 T. L. R. 449 ...	110, 215, 217, 325
<i>Flack, In re, Berry, Ex parte</i> , [1900] 2 Q. B. 32; 69 L. J. Q. B. 458; 82 L. T. 508; 48 W. R. 446; 7 Manson, 141 .....	121
<i>Fleece Mills Co., Ltd., In re, Jl. of G. L.</i> , June 11th, 1901, p. 1,577 .....	94
<i>Fletcher v. Rylands</i> (1868), L. R. 3 H. L. 330; 37 L. J. Ex. 161; 19 L. T. (N.S.) 220 .....	102, 150, 339, 342
<i>Freake's Settlement, In re, Kinnaird (Lord) v. Freake</i> , [1902] 1 Ch. 97; 71 L. J. Ch. 20; 85 L. T. 454; 50 W. R. 237 .....	54, 55
<i>Gaskell's Settled Estates, In re</i> , [1894] 1 Ch. 485; 63 L. J. Ch. 243; 8 R. 67; 70 L. T. 554; 42 W. R. 219.....	55
<i>Gas Light and Coke Co. v. Hardy</i> (1886), 17 Q. B. D. 619; 56 L. J. Q. B. 168; 55 L. T. 585; 35 W. R. 50; 61 J. P. 6; 2 T. L. R. 851 .....	122
<i>Gas Light and Coke Co. v. St. Mary Abbott's Vestry</i> (1885), 15 Q. B. D. 1; 54 L. J. Q. B. 414; 53 L. T. 457; 33 W. R. 892; 49 J. P. 469; 1 T. L. R. 452.....	223
<i>Gas Light and Coke Co. v. South Metropolitan Gas Co.</i> (1889), 62 L. J. Ch 123; 62 L. T. 126; 54 J. P. 373; 5 T. L. R. 731.....	159
<i>Geddis v. Bann Reservoir</i> (1878), 3 App. Cas. 430.....	19, 20, 57, 62, 209
<i>Goldberg v. Liverpool Corp.</i> (1900), 82 L. T. 362; 16 T. L. R. 320 .....	215
<i>Goldsmid v. Tunbridge Wells Improvement Commissioners</i> (1866), L. R. 1 Ch. 349; 35 L. J. Ch. 382; 12 Jur. (N.S.) 208; 14 L. T. (N.S.) 154; 14 W. R. 512.....	213
<i>Goodson v. Richardson</i> (1874), L. R. 9 Ch. 221; 43 L. J. Ch. 790; 30 L. T. 142; 22 W. R. 337 .....	215, 223
<i>Goodson v. Sunbury Gas Consumers Co.</i> (1896), 75 L. T. 251; 60 J. P. 585 226, 227	
<i>Gray v. Pullen</i> (1864), 5 B. & S. 970; 34 L. J. Q. B. 265; 11 L. T. 569; 13 W. R. 257.....	220
<i>Hammersmith and City Rail. Co. v. Brand</i> (1868), L. R. 4 H. L. 171; 38 L. J. Q. B. 265; 21 L. T. 238; 18 W. R. 12 .....	19
<i>Hammersmith Borough Council v. Central London Rail. Co., Electrician</i> , Dec. 14th, 1900, p. 292; Feb. 1st, 1901, p. 558 .....	209, 210
<i>Hardaker v. Idle D. C.</i> , [1896] 1 Q. B. 335; 65 L. J. Q. B. 363; 74 L. T. 69; 44 W. R. 323; 60 J. P. 196; 12 T. L. R. 207 .....	220
<i>Harrington (Cumberland) Gas Light Co., Electrician</i> , April 6th, 1900, p. 872; <i>Jl. of G. L.</i> , April 3rd, 1900, p. 879.....	94
<i>Hawkins v. Robinson</i> (1873), 37 J. P. 662 .....	213
<i>Holliday v. National Telephone Co.</i> , [1899] 2 Q. B. 392; 68 L. J. Q. B. 1016; 81 L. T. 252; 47 W. R. 658; 15 T. L. R. 483 .....	220
<i>Howitt v. Nottingham Tramways Co.</i> (1883), 12 Q. B. D. 16; 53 L. J. Q. B. 21; 50 L. T. 99; 32 W. R. 248 .....	174
<i>Hoyle v. West Kirby Gas and Water Co., Jl. of G. L.</i> , Nov. 10th, 1896, p. 911 .....	94
<i>Huddersfield Corp. v. National Telephone Co., Electrician</i> , June 22nd, 1900, p. 335; May 3rd, 1901, p. 66 .....	219

B.L.

b

	PAGE
Hughes v. Percival (1883), 8 App. Cas. 443; 52 L. J. Q. B. 719; 49 L. T. 189; 31 W. R. 725; 47 J. P. 772 .....	220
Hunt v. Wimbledon L. B. (1878), 4 C. P. D. 48; 48 L. J. C. P. 207; 40 L. T. 115; 27 W. R. 123.....	103
Husey v. Gaslight and Coke Co. (1902), 18 T. L. R. 299 .....	118, 121
Husey v. London E. S. Corp., [1902] 1 Ch. 411; 71 L. J. Ch. 313; 86 L. T. 166; 50 W. R. 420; 18 T. L. R. 296 .....	25, 116, 118, 121
Hyde Corp. v. Oldham, Ashton, and Hyde Electric Tramway (1900), 64 J. P. 596; 16 T. L. R. 492.....	214, 221
Jeremiah Ambler & Sons, Ltd. v. Bradford Corp., [1902] 2 Ch. 585; 71 L. J. Ch. 744; 87 L. T. 217; 66 J. P. 708; 18 T. L. R. 758 .....	51
Kinnaird (Lord) v. Freake, Freake's Settlement, <i>In re</i> , [1902] 1 Ch. 97; 71 L. J. Ch. 20; 85 L. T. 454; 50 W. R. 237.....	54, 55
Lambeth Borough Council v. South London E. S. Corp., <i>Electrician</i> , Dec. 14th, 1901, p. 292.....	210
Law v. Redditch L. B., [1892] 1 Q. B. 127; 61 L. J. Q. B. 172; 66 L. T. 76; 56 J. P. 292; 8 T. L. R. 90 .....	120
Leamington and Warwick Tramways, &c., Co., Ltd., <i>Re, El. Rev.</i> , July 18th, 1902, p. 100; <i>Electrician</i> , July 18th, 1902, p. 529 .....	94
Levy v. National Telephone Co., <i>Times</i> , Dec. 18th, 1897 .....	111, 325
Locke King v. Woking U. D. C. (1898), 77 L. T. 790; 62 J. P. 167; 14 T. L. R. 32 .....	213
London and North-Western Rail. Co. v. Evans, [1893] 1 Ch. 16; 62 L. J. Ch. 1; 67 L. T. 630; 41 W. R. 149; 2 R. 120; 9 T. L. R. 50 .....	222
London, Brighton and South Coast Rail. Co. v. Truman (1885), 11 App. Cas. 45; 55 L. J. Ch. 354; 54 L. T. 250; 34 W. R. 657; 50 J. P. 388.....	21
London Corp. v. City of London E. L. Co., <i>Electrician</i> , Feb. 17th, 1899, p. 582 .....	186
London Corp. (Crawford, on behalf of) v. City of London E. L. Co. (1898), 67 L. J. Q. B. 942; 78 L. T. 841; 47 W. R. 45.....	196
London C. C. v. London E. S. Corp., <i>Jl. of G. L.</i> , May 1st, 1900, p. 1,135 ...	188
London C. C. v. Metropolitan E. S. Co., <i>Jl. of G. L.</i> , Jan. 23rd, 1900, p. 212	188
London C. C. v. Metropolitan E. S. Co. (1902), <i>Times</i> , March 11th, 1902; <i>Electrician</i> , March 14th, 1902, p. 831.....	105
London E. S. Corp. v. Brickwell, <i>Times</i> , Feb. 24th, 1902; <i>El. Rev.</i> , Feb. 28th, 1902, p. 336 .....	119
London E. S. Corp. v. Greenberg, <i>El. Rev.</i> , Aug. 15th, 1902, p. 258; <i>Electrician</i> , Aug. 15th, 1902, p. 685 .....	119
London E. S. Corp. v. Priddis (1901), 18 T. L. R. 64 .....	119
McIntosh and Pontypridd Improvements Co., <i>In re</i> (1892), 61 L. J. Q. B. 164; 8 T. L. R. 203.....	226
Maddock v. Wallasey L. B. (1886), 50 J. P. 404; 55 L. J. Q. B. 267 .....	224
Marylebone Borough Council v. Metropolitan E. S. Co. (1901), 65 J. P. 172 ...	236
Marylebone Vestry v. Metropolitan E. S. Co., <i>Jl. of G. L.</i> , Jan. 2nd, 1900, p. 34; May 1st, 1900, p. 1,236; <i>Electrician</i> , Jan. 5th, 1900, p. 375 .....	188
Marylebone Vestry v. Metropolitan E. S. Co., <i>Jl. of G. L.</i> , Jan. 23rd, 1900, p. 212 .....	188
Mason, <i>Ex parte</i> , Smith, <i>In re</i> , [1893] 1 Q. B. 323; 67 L. T. 596; 41 W. R. 159; 57 J. P. 72; 9 Morrell B. R. 304; 5 R. 47; 9 T. L. R. 15 .....	120
Mellias v. Shirley L. B. (1885), 16 Q. B. D. 446; 55 L. J. Q. B. 143; 53 L. T. 810; 34 W. R. 187; 50 J. P. 214; 2 T. L. R. 360 .....	103

## TABLE OF CASES.

xix

	PAGE
Metropolitan E. S. Co. v. Ginder, [1901] 2 Ch. 799; 70 L. J. Ch. 862; 84 L. T. 818; 49 W. R. 508; 65 J. P. 519; 17 T. L. R. 485 .....	116, 118
Meux's Brewery Co. v. City of London E. L. Co., [1895] 1 Ch. 287; [1895] 2 Ch. 388; 64 L. J. Ch. 216; 72 L. T. 34; 43 W. R. 238; 12 R. 112; 11 T. L. R. 187 .....	102, 115
Milnes v. Huddersfield (Mayor) (1886), 11 App. Cas. 511; 56 L. J. Q. B. 1; 55 L. T. 617; 84 W. R. 761; 50 J. P. 676; 2 T. L. R. 821 .....	227
Montreal, City of, v. Standard Light and Power Co., [1897] A. C. 527; 66 L. J. P. C. 113; 77 L. T. 115 .....	216
Morley, <i>In re</i> (1875), L. R. 20 Eq. 17; 32 L. T. 524; 23 W. R. 532 .....	97
National Telephone Co. v. Baker, [1893] 2 Ch. 186; 62 L. J. Ch. 699; 3 R. 318; 68 L. T. 283; 57 J. P. 873; 9 T. L. R. 246 .....	19, 102, 150, 339
National Telephone Co. v. St. Peter Port Constables, [1900] A. C. 317; 69 L. J. P. C. 74; 82 L. T. 398 .....	110, 214, 325
National Telephone Co. v. Tunbridge Wells Corp., (1901) 85 L. T. 368; 17 T. L. R. 459 .....	219
Neaverson v. Peterborough R. D. C., [1902] 1 Ch. 557; 71 L. J. Ch. 378; 86 L. T. 738; 50 W. R. 549; 66 J. P. 404; 18 T. L. R. 360 .....	213
Neeld v. Hendon U. D. C. (1899), 81 L. T. 405; 63 J. P. 724; 16 T. L. R. 50	213
Normanton Gas Co. v. Pope (1883), 52 L. J. Q. B. 629; 49 L. T. 798; 32 W. R. 134 .....	222
Oriental Telephone Co., <i>In re</i> , W. N. [1891] 153 .....	94
Paterson v. Gaslight and Coke Co., [1896] 2 Ch. 476; 65 L. J. Ch. 709; 74 L. T. 640; 45 W. R. 39; 60 J. P. 532; 12 T. L. R. 459 .....	120, 121
Penny v. Wimbledon U. D. C., [1899] 2 Q. B. 72; 68 L. J. Q. B. 704; 80 L. T. 615; 47 W. R. 565; 63 J. P. 406; 15 T. L. R. 348 .....	219
Postmaster-General v. Edinburgh Corp. (1899), 10 Ry. & Can. Traff. Cas. 247	218
Postmaster-General v. Glasgow Corp. (1899), 10 Ry. & Can. Traff. Cas. 238 ...	218
Postmaster-General v. London Corp. (1898), 10 Ry. & Can. Traff. Cas. 234; 78 L. T. 120; 62 J. P. 380; 14 T. L. R. 222 .....	218
Pudsey Coal Gas Co. v. Bradford Corp. (1873), L. R. 15 Eq. 167; 42 L. J. Ch. 293; 28 L. T. 11; 21 W. R. 286 .....	213
Quelch, <i>Ex parte</i> , Reg. v. Titterton, [1895] 2 Q. B. 61; 64 L. J. M. C. 202; 73 L. T. 345; 43 W. R. 603; 15 R. 418; 59 J. P. 327; 18 Cox, C. C. 181 ...	330
Rattee v. Norwich Electric Tramways Co. (1902), 18 T. L. R. 562 .....	57
R. v. East and West India Docks (1853), 2 E. & B. 466; 22 L. J. Q. B. 380; 17 Jur. 1181; 1 C. L. R. 496; 1 W. R. 409 .....	115
R. v. Knight (1860), 2 E. & E. 651; 29 L. J. M. C. 118; 6 Jur. (n.s.) 601; 2 L. T. (n.s.) 14; 8 W. R. 298; 8 Cox, C. C. 317 .....	213
R. v. Longton Gas Co. (1860), 2 E. & E. 651; 29 L. J. M. C. 118; 6 Jur. (n.s.) 601; 2 L. T. (n.s.) 14; 8 W. R. 298; 8 Cox, C. C. 317 .....	213
R. v. Sheffield Gas Consumers Co. (1853), 18 Jur. 146 n. ....	213
R. v. Shiel (1900), 82 L. T. 587; 19 Cox, C. C. 507; 16 T. L. R. 349 .....	167
R. v. Titterton, [1895] 2 Q. B. 61; 64 L. J. M. C. 202; 73 L. T. 345; 43 W. R. 603; 15 R. 418; 59 J. P. 327; 18 Cox, C. C. 181 .....	330
R. v. United Kingdom Telegraph Co. (1862), 31 L. J. M. C. 166; 2 B. & S. 647 n.; 3 F. & F. 732; 8 Jur. (n.s.) 1153; 6 L. T. (n.s.) 378; 10 W. R. 538; 9 Cox, C. C. 174 .....	213
R. v. White (1853), 22 L. J. M. C. 123; 1 C. L. R. 489; Dears, C. C. 203 ...	121
Rugeley Gas. Co., <i>In re</i> , W. N. [1899] 127 .....	94

	PAGE
Rylands v. Fletcher (1868), L. R. 3 H. L. 330; 37 L. J. Ex. 161; 19 L. T. (n.s.) 220 .....	102, 150, 339, 342
St. Benet Fink, <i>In re</i> , [1893] P. 58 .....	168
St. James' and Pall Mall E. L. Co. v. Postmaster-General, <i>Jl. of G. L.</i> , Aug. 19th, 1902, p. 503; <i>Electrician</i> , Aug. 15th, 1902, p. 685; <i>El. Rev.</i> , Aug. 22nd, 1902, p. 312; <i>Times</i> , Aug. 14th, 1902 .....	231
St. Mary Vestry (Battersea) v. County of London and Brush Provincial E. L. Co., [1899] 1 Ch. 474; 68 L. J. Ch. 238; 80 L. T. 31; 15 T. L. R. 175 ...	215
St. Nicholas Cole Abbey, <i>In re</i> , [1893] P. 58 .....	168
Selby v. Crystal Palace District Gas Co. (1862), 31 L. J. Ch. 595; 4 De G. F. & J. 246; 8 Jur. (n.s.) 830; 6 L. T. (n.s.) 790; 10 W. R. 636 .....	234
Shaddick v. London E. S. Corp., <i>Jl. of G. L.</i> , May 8th, 1900, p. 1,235 .....	188
Sheffield Corp. v. Sheffield E. L. Co., [1898] 1 Ch. 203; 67 L. J. Ch. 113; 77 L. T. 616; 46 W. R. 485; 62 J. P. 87 .....	100
Shelfer v. City of London E. L. Co., [1895] 1 Ch. 287; [1895] 2 Ch. 388; 64 L. J. Ch. 216; 72 L. T. 34; 43 W. R. 238; 12 R. 112; 11 T. L. R. 137...102,	115
Smith, <i>In re</i> , Mason, <i>Ex parte</i> , [1893] 1 Q. B. 323; 67 L. T. 596; 41 W. R. 159; 57 J. P. 72; 9 Morrell B. R. 304; 5 R. 47; 9 T. L. R. 15 .....	120
<i>Snark, The</i> , [1899] P. 74; 68 L. J. P. 22; 80 L. T. 25; 47 W. R. 398; 16 T. L. R. 160; 8 Asp. M. C. 483 .....	220
South London E. S. Co. v. Gouldsten, <i>Electrician</i> , Oct. 10th, 1902, p. 1,004; <i>El. Rev.</i> , Oct. 10th, 1902, p. 618 .....	119
South London E. S. Co. v. Perrin, [1901] 2 K. B. 186; 70 L. J. K. B. 643; 84 L. T. 630; 49 W. R. 539; 65 J. P. 627; 19 Cox, C. C. 717; 17 T. L. R. 475	309
South Metropolitan Gas Co. v. Noakes (1889), 61 L. T. 556; 5 T. L. R. 448 ...	88
Southwark and Vauxhall Water Co. v. Wandsworth District B. of W., [1898] 2 Ch. 603; 67 L. J. Ch. 657; 79 L. T. 132; 47 W. R. 107; 62 J. P. 756; 14 T. L. R. 576 .....	57, 177
Stockport District Water Co. v. Manchester Corp. (1863), 9 Jur. (n.s.) 266; 7 L. T. (n.s.) 545; 11 W. R. 156 .....	213
Strickland v. Williams, [1899] 1 Q. B. 382; 68 L. J. Q. B. 241; 80 L. T. 4; 15 T. L. R. 131 .....	120
Sun Insurance Co. v. Dublin Corp., <i>Electrician</i> , Dec. 9th, 1898, p. 240 .....	188
Thompson v. Sunderland Gas Co. (1877), 2 Ex. D. 429; 46 L. J. Ex. 710; 37 L. T. 30; 25 W. R. 809 .....	223
Tunbridge Wells Corp. v. Baird, [1896] A. C. 434; 65 L. J. Q. B. 451; 74 L. T. 385; 60 J. P. 788; 12 T. L. R. 372 .....	215
Uppingham Gas Co., <i>Re</i> , <i>Electrician</i> , June 28th, 1901, p. 384; <i>Jl. of G. L.</i> , June 25th, 1901, p. 1,758 .....	94
Walker U. D. C. v. Wigham, Richardson & Co., Ltd. (1901), 85 L. T. 579; 66 J. P. 152; 18 T. L. R. 107 .....	217
Wandsworth B. of W. v. County of London and Brush Provincial E. L. Co., <i>Jl. of G. L.</i> , Aug. 13th, 1895, p. 345 .....	167
Wandsworth B. of W. v. United Telephone Co. (1884), 13 Q. B. D. 904; 53 L. J. Q. B. 449; 51 L. T. 148; 32 W. R. 776; 48 J. P. 676 .....	110, 214, 325
White and Arthur, <i>Re</i> an Arbitration between (1901), 84 L. T. 594; 50 W. R. 81; 17 T. L. R. 461 .....	120
Whitechapel B. of W. v. Crow (1901), 84 L. T. 595; 65 J. P. 549; 19 Cox, C. C. 700; 17 T. L. R. 463 .....	167
Whitwood Chemical Co. v. Hardman, [1891] 2 Ch. 416; 60 L. J. Ch. 428; 64 L. T. 716; 39 W. R. 433; 7 T. L. R. 325 .....	118
Wigham, Richardson & Co. v. Walker U. D. C. (1901), 85 L. T. 579; 66 J. P. 152; 18 T. L. R. 107 .....	217



## TABLE OF CASES.

xxi

	PAGE
<i>Wilkins v. Day</i> (1883), 12 Q. B. D. 110 ; 49 L. T. 399 ; 32 W. R. 123 ; 48 J. P. 6 .....	213
<i>Willson v. Love</i> , [1896] 1 Q. B. 626 ; 65 L. J. Q. B. 474 ; 74 L. T. 580 ; 44 W. R. 450.....	120
<i>Wood v. West Ham Gas Co.</i> (1885), 52 L. T. 817 ; 33 W. R. 799 ; 49 J. P. 662	226
<i>Wray v. Ellis</i> (1858), 1 E. & E. 276 ; 28 L. J. M. C. 45 ; 5 Jur. (n.s.) 624 ; 7 W. R. 91 .....	330
<i>Yabbicom v. King</i> , [1899] 1 Q. B. 444 ; 68 L. J. Q. B. 560 ; 80 L. T. 159 ; 47 W. R. 318 ; 63 J. P. 149 .....	226
<i>Ydun, The</i> , [1899] P. 236 ; 68 L. J. P. 101 ; 81 L. T. 10 ; 8 Asp. M. C. 551 ; 15 T. L. R. 361 .....	51
<i>Young v. Leamington Corp.</i> (1883), 8 App. Cas. 517 ; 52 L. J. Q. B. 713 ; 49 L. T. 1 ; 31 W. R. 925 ; 47 J. P. 660 .....	103



## TABLE OF STATUTES.

---

	PAGE
5 & 6 Will. 4, c. 50. (Highway Act, 1835)—	
s. 72 .....	218
5 & 6 Will. 4, c. 76. (Municipal Corporations Act, 1835) .....	188
2 & 3 Vict. c. 71. (Metropolitan Police Courts Act, 1839) .....	330
8 & 9 Vict. c. 18. (Lands Clauses Consolidation Act, 1845)...	106, 107, 133, 221, 375, 397, 419, 427, 444, 447
ss. 18, 68, 84, 92 .....	419
8 & 9 Vict. c. 19. (Lands Clauses Consolidation (Scotland) Act, 1845) .....	185, 221
8 & 9 Vict. c. 20. (Railways Clauses Consolidation Act, 1845).....	108, 411 ss. 140—160..... 108
8 & 9 Vict. c. 33. (Railways Clauses Consolidation (Scotland) Act, 1845)...	108
10 & 11 Vict. c. 15. (Gasworks Clauses Act, 1847) 19, 21, 27, 106, 107, 120, 164,	165, 211, 224 s. 3..... 212 s. 6..... 115 134, 212, 224 s. 7..... 21, 107, 109, 223 s. 8..... 224 s. 9..... 169, 225 s. 10 ..... 226 s. 11 ..... 48, 226 s. 12 ..... 227 s. 14 ..... 122 s. 18 ..... 227 ss. 19, 20 ..... 228 s. 40 ..... 108 s. 49 ..... 134
10 Vict. c. 17. (Waterworks Clauses Act, 1847) .....	19 446, 447 ss. 18—27..... 222 s. 19 ..... 423
10 & 11 Vict. c. 69. (House of Commons Costs Taxation Act, 1847).....	97
10 & 11 Vict. c. 89. (Town Police Clauses Act, 1847)—	
s. 3.....	224
11 & 12 Vict. c. 43. (Summary Jurisdiction Act, 1848) .....	108, 127, 128, 329, 383
12 & 13 Vict. c. 73. (House of Lords Costs Taxation Act, 1849) .....	97
14 & 15 Vict. c. 93. (Petty Sessions (Ireland) Act, 1851) .....	128
18 & 19 Vict. c. 120. (Metropolis Management Act, 1855) .....	136, 326, 331 s. 96 ..... 110, 214, 215 ss. 183—191, 195..... 137
23 & 24 Vict. c. 106. (Lands Clauses Consolidation Act, 1860)...	106, 107, 133, 135
23 & 24 Vict. c. 125. (Metropolis Gas Act, 1860)—	
s. 6.....	158
25 & 26 Vict. c. 89. (Companies Act, 1862) .....	12, 94, 238

	PAGE
25 & 26 Vict. c. 101. (General Police and Improvement (Scotland) Act, 1862)—	
ss. 77, 78 .....	141
25 & 26 Vict. c. 102. (Metropolis Management Amendment Act, 1862) .....	326
s. 106.....	330
26 & 27 Vict. c. 93. (Waterworks Clauses Act, 1863) .....	19
26 & 27 Vict. c. 112. (Telegraph Act, 1863)... 92, 112, 124, 125, 127, 128, 134, 208,	
217, 218, 219, 221	
s. 3.....	125
s. 6.....	220, 221
s. 7.....	220
s. 8.....	126
s. 13 .....	221
26 & 27 Vict. c. 118. (Companies Clauses Act, 1863).....	208, 443, 445
27 & 28 Vict. c. 53. (Summary Procedure Act, 1864) .....	128
27 & 28 Vict. c. 121. (Railways Construction Facilities Act, 1864).....	124, 131
29 & 30 Vict. c. 3. (Telegraph Act Amendment Act, 1866) .....	124, 125
30 & 31 Vict. c. 101. (Public Health (Scotland) Act, 1867)—	
s. 86 .....	141
31 & 32 Vict. c. 110. (Telegraph Act, 1868).....	124, 125
s. 2.....	221
31 & 32 Vict. c. 119. (Regulation of Railways Act, 1868)—	
ss. 30—32 .....	345
31 & 32 Vict. c. 122. (Poor Law Amendment Act, 1868)—	
s. 24 .....	139
32 & 33 Vict. c. 18. (Lands Clauses Act, 1869)...106, 133, 375, 397, 427, 444, 447	
32 & 33 Vict. c. 73. (Telegraph Act, 1869).....	92, 124, 125, 133, 134
s. 3.....	91, 92
32 & 33 Vict. c. 102. (Metropolitan Board of Works (Loans) Act, 1869).....	137
33 & 34 Vict. c. 70. (Gas and Water Works Facilities Act, 1870) .....	107
33 & 34 Vict. c. 78. (Tramways Act, 1870).....	19, 214, 361, 381
s. 3.....	214, 215
ss. 4, 5, 8, 23 .....	374
s. 26 .....	214, 215, 391
s. 28 .....	174, 221
s. 29 .....	174
s. 34 .....	374
33 & 34 Vict. c. 88. (Telegraph Act, 1870) .....	124, 125
34 & 35 Vict. c. 17. (Bank Holidays Act, 1871) .....	201
34 & 35 Vict. c. 41. (Gasworks Clauses Act, 1871).....	19, 27, 107, 120, 211
s. 11 .....	132
s. 18 .....	122
s. 20 .....	198
s. 21 .....	122
s. 36 .....	132
s. 38 .....	106, 211, 228
s. 39 .....	106, 120, 211, 229
s. 40 .....	37, 106, 108, 121, 211, 212, 229
s. 41 .....	37, 106, 211, 230
ss. 42, 45, 46.....	106, 211, 230
34 & 35 Vict. c. 113. (Metropolis Water Act, 1871)—	
s. 43 .....	121
35 & 36 Vict. c. 91. (Borough Funds Act, 1872)—	
s. 2.....	92
s. 10 .....	91
37 & 38 Vict. c. 40. (Board of Trade Arbitrations, &c., Act, 1874)...44, 130, 256, 259	

## TABLE OF STATUTES.

XXV

	PAGE
37 & 38 Vict. c. 40. (Board of Trade Arbitrations, &c., Act, 1874)— <i>continued</i> .	
ss. 2, 3 .....	130
s. 4.....	131
38 & 39 Vict. c. 55. (Public Health Act, 1875).....	97, 99, 135, 138, 163
s. 26 .....	216
s. 149.....	177, 213, 215, 216, 217
s. 161.....	216
s. 174.....	103
s. 229.....	97
ss. 233, 234.....	98, 139
ss. 236, 237, 238, 239.....	98, 99, 139
s. 246.....	138, 139
ss. 247, 248 .....	139
s. 265.....	50, 163, 210, 211, 304
38 & 39 Vict. c. 83. (Local Loans Act, 1875).....	98, 100
39 & 40 Vict. c. 49. (Burghs Gas Supply (Scotland) Act, 1876).....	140
ss. 18—22, 27—40 .....	140
41 & 42 Vict. c. 32. (Metropolis Management and Building Acts Amend- ment Act, 1878)—	
s. 12 .....	315
41 & 42 Vict. c. 49. (Weights and Measures Act, 1878) .....	51
41 & 42 Vict. c. 52. (Public Health (Ireland) Act, 1878) .....	135, 142
ss. 237, 238, 240—243, 248 .....	143
s. 264.....	211
41 & 42 Vict. c. 76. (Telegraph Act, 1878)...41, 123, 124, 125, 127, 128, 149, 156, 217, 218, 219, 327	
s. 2.....	124, 340
ss. 3, 4 .....	218
s. 7.....	48, 124, 125
ss. 8, 9 .....	48, 124, 127
s. 10 .....	124, 127
ss. 11, 12 .....	124, 128
42 & 43 Vict. c. 6. (District Auditors Act, 1879) .....	139
42 & 43 Vict. c. 17. (House of Commons Costs Taxation Act, 1879)—	
s. 1.....	97
42 & 43 Vict. c. 49. (Summary Jurisdiction Act, 1879).....	108, 127, 128, 329, 333
s. 6.....	108, 230
s. 34 .....	113
s. 35 .....	108, 230
44 & 45 Vict. c. 33. (Summary Jurisdiction (Scotland) Act, 1881) .....	128
45 & 46 Vict. c. 38. (Settled Land Act, 1882) .....	54
45 & 46 Vict. c. 50. (Municipal Corporations Act, 1882) .....	138
s. 25 .....	138
45 & 46 Vict. c. 56. (Electric Lighting Act, 1882)...5, 6, 12, 15, 16, 17, 19, 21, 32, 33, 39, 72, 74, 88, 89, 97, 103, 107, 113, 134, 144, 147, 149, 150, 151, 152, 153, 154, 184, 222, 231, 235, 243, 257, 261, 262, 325, 330, 331, 368, 438, 447, 448	
s. 1.....	88, 150, 152, 438
s. 2.....	88, 438
s. 3.....	7, 10, 11, 12, 46, 89, 134, 144, 219, 237, 438
s. 4.....	6, 10, 11, 92, 144, 210, 236, 438
s. 5.....	94, 438
s. 6.....	13, 16, 35, 61, 95, 164, 181, 353, 438, 440
s. 7.....	16, 97, 138, 438





TABLE OF STATUTES.

xxvii

	PAGE.
52 & 53 Vict. c. 21. (Weights and Measures Act, 1889) .....	292
s. 6.....	51
s. 8.....	299
52 & 53 Vict. c. 34. (Telegraph (Isle of Man) Act, 1889).....	125, 217
52 & 53 Vict. c. 49. (Arbitration Act, 1889).....	256, 259, 420
s. 5.....	420
52 & 53 Vict. c. 50. (Local Government (Scotland) Act, 1889)—	
ss. 67—70 .....	141
52 & 53 Vict. c. 63. (Interpretation Act, 1889)—	
ss. 12, 13 .....	128
s. 19 .....	165
53 & 54 Vict. c. 13. (Electric Lighting (Scotland) Act, 1890)...15, 88, 89, 135, 153,	
s. 1.....	154, 235
s. 2.....	140, 151
ss. 3—6.....	151
s. 3.....	152
53 & 54 Vict. c. 59. (Public Health Acts Amendment Act, 1890) .....	97, 113, 150
ss. 2, 3, 5 .....	97
ss. 13, 14 .....	113
s. 15 .....	97, 113
53 & 54 Vict. c. 62. (Companies (Memorandum of Association) Act, 1890)—	
s. 1.....	94
53 & 54 Vict. c. 69. (Settled Land Act, 1890) .....	55
s. 13 .....	54
53 & 54 Vict. c. 70. (Housing of the Working Classes Act, 1890) .....	57
54 & 55 Vict. c. 75. (Factory and Workshop Act, 1891) .....	52
ss. 8, 9 .....	53
54 & 55 Vict. c. 76. (Public Health (London) Act, 1891)—	
s. 24 .....	209
s. 124.....	163, 304
54 & 55 Vict. ch. lxxvii. (London Overhead Wires Act, 1891).....	110, 325, 333
s. 1.....	325
s. 2.....	326
s. 3.....	32, 327
s. 4.....	327
s. 5.....	31, 327
ss. 6, 7 .....	328
ss. 8—12 .....	329
ss. 13—15 .....	330
ss. 16, 17 .....	32, 325, 330
s. 18 .....	32, 325, 331, 332
s. 19 .....	32, 325, 331
ss. 20—23.....	331
55 & 56 Vict. c. 19. (Statute Law Revision Act, 1892).....	137
55 & 56 Vict. c. 39. (Stamp Act, 1891)—	
s. 4.....	104
55 & 56 Vict. c. 55. (Burgh Police (Scotland) Act, 1892)—	
s. 69 .....	141
s. 99 .....	140
55 & 56 Vict. c. 59. (Telegraph Act, 1892).....	125, 219
s. 3.....	124
s. 5.....	217, 218
s. 6.....	103
s. 8.....	124
56 & 57 Vict. c. 33. (Housing of the Working Classes Act, 1893) .....	142

	PAGE
56 & 57 Vict. c. 52. (Burghs Gas Supply (Scotland) Act, 1893).....	140
56 & 57 Vict. c. 58. (Companies (Winding-up) Act, 1893) .....	94
56 & 57 Vict. c. 61. (Public Authorities Protection Act, 1893).....	50, 51, 163, 330
s. 1.....	51
56 & 57 Vict. c. 66. (Rules Publication Act, 1893) .....	54
56 & 57 Vict. c. 73. (Local Government Act, 1894) .....	101
s. 21 .....	138, 139
ss. 58, 89 .....	139
57 & 58 Vict. c. 28. (Notices of Accidents Act, 1894) .....	54, 192, 380, 382
ss. 1, 2 .....	264
57 & 58 Vict. c. 56. (Statute Law Revision Act, 1894) .....	127, 128, 139
57 & 58 Vict. ch. cxxiii. (London Building Act, 1894) .....	166
s. 164.....	226
58 & 59 Vict. c. 16. (Finance Act, 1895)—	
s. 12 .....	146
59 & 60 Vict. c. 48. (Light Railways Act, 1896) .....	57, 72, 114, 375, 397
s. 10 .....	397
s. 11 .....	375
s. 25 .....	124
59 & 60 Vict. c. 54. (Public Health (Ireland) Act, 1896).....	135
s. 35 .....	135
60 & 61 Vict. c. 37. (Workmen's Compensation Act, 1897)—	
s. 7.....	221
60 & 61 Vict. c. 38. (Public Health (Scotland) Act, 1897)—	
s. 139.....	141
s. 145.....	124
60 & 61 Vict. c. 41. (Post Office and Telegraph Act, 1897).....	208
60 & 61 Vict. ch. cxxxiii. (City of London Sewers Act, 1897) .....	32, 326
61 & 62 Vict. c. 37. (Local Government (Ireland) Act, 1898).....	211
ss. 22, 27, 33 .....	142
62 & 63 Vict. c. 14. (London Government Act, 1899) .....	334
s. 4.....	136
62 & 63 Vict. c. 19. (Electric Lighting (Clauses) Act, 1899) .....	5, 13, 14, 18, 44, 46, 63, 65, 88, 91, 95, 105, 107, 110, 116, 120, 132, 232, 237, 447, 449
s. 1.....	88, 154
s. 2.....	14, 154

## SCHEDULE.

s. 1.....	134, 155, 164, 169, 225
s. 2.....	157, 231, 303, 440
s. 3.....	45, 71, 157, 440, 442
s. 4.....	13, 45, 49, 71, 158, 231, 440, 442
s. 5.....	45, 159, 202, 232, 440, 442, 447
s. 6.....	100, 440, 444
s. 7.....	33, 161, 440, 447
s. 8.....	102, 162, 440, 447
s. 9.....	163, 304, 440, 447
s. 10 .....	22, 31, 95, 101, 110, 163, 226, 304, 439, 440
s. 11 .....	101, 164, 211, 226, 441
s. 12 .....	101, 109, 165, 172, 232, 438, 441
s. 13 .....	46, 101, 108, 165, 223, 250, 441
s. 14 ...	46, 101, 124, 168, 174, 223, 225, 226, 227, 305, 441
s. 15 ...	38, 41, 46, 101, 109, 131, 165, 170, 174, 223, 441

## TABLE OF STATUTES.

XXIX

62 & 63 Vict. c. 19. (Electric Lighting (Clauses) Act, 1899)—  
SCHEDULE—continued.

PAGE

s. 16 .....	47, 92, 101, 172, 219, 223, 305, 441
s. 17 .....	22, 41, 47, 101, 114, 181, 174, 223, 305, 441
s. 18 .....	41, 47, 101, 131, 177, 223, 305, 368, 438, 441
s. 19 .....	101, 115, 179, 441
s. 20 .....	39, 41, 47, 101, 124, 181, 179, 441
s. 21 .....	23, 109, 181, 223, 232, 441
s. 22 .....	182, 229, 441
s. 23 .....	24, 45, 47, 181, 182, 305, 441, 442
s. 24 .....	24, 43, 181, 183, 305, 441
s. 25 .....	43, 181, 181, 183, 305, 441
s. 26 .....	43, 181, 185, 441
s. 27 .....	24, 30, 43, 116, 131, 185, 441
s. 28 .....	26, 43, 181, 187, 441
s. 29 .....	26, 187, 441
s. 30 .....	26, 47, 186, 187, 441
s. 31 .....	35, 117, 189, 305, 441
s. 32 .....	37, 189, 232, 441
s. 33 .....	117, 190, 441
s. 34 .....	26, 43, 117, 132, 190, 441
s. 35 .....	190, 305, 312, 441
s. 36 .....	27, 191, 193, 197, 305, 312, 441
s. 37 .....	27, 191, 305, 312, 441
s. 38 .....	27, 47, 49, 50, 54, 192, 247, 441
ss. 39, 40 .....	28, 193, 441
s. 41 .....	28, 44, 132, 193, 305, 441
ss. 42, 43, 44 .....	23, 194, 441
s. 45 .....	23, 195, 441
s. 46 .....	28, 47, 195, 441
s. 47 .....	28, 195, 441
s. 48 .....	27, 23, 195, 441
s. 49 .....	28, 196, 197, 198, 199, 228, 442
ss. 50, 51 .....	28, 196, 228, 442
s. 52 .....	29, 197, 228, 442
s. 53 .....	29, 47, 197, 228, 442
s. 54 .....	29, 197, 198, 228, 442
s. 55 .....	29, 30, 198, 228, 442
s. 56 .....	29, 197, 198, 228, 442
s. 57 .....	29, 198, 228, 306, 442
s. 58 .....	199, 228, 442
s. 59 .....	29, 199, 228, 442
s. 60 .....	29, 48, 199, 306, 442
s. 61 .....	200, 230, 442
s. 62 .....	200, 442
ss. 63, 64 .....	45, 201, 442
s. 65 .....	45, 160, 202, 442
s. 66 .....	45, 202, 442
s. 67 .....	202, 442
s. 68 .....	44, 132, 204, 442
s. 69 .....	23, 45, 48, 205, 442
s. 70 .....	15, 48, 205, 306, 442
s. 71 .....	206, 229, 442
ss. 72, 73, 74 .....	206, 442
s. 75 .....	207, 306, 443
s. 76 .....	108, 207, 306, 443

62 & 63 Vict. c. 19.	(Electric Lighting (Clauses) Act, 1899)— SCHEDULE— <i>continued</i> .	PAGE
	s. 77 .....	49, 208, 443, 447
	s. 78 .....	208, 443
	s. 79 .....	39, 124, 208, 443
	s. 80 .....	208, 443
	s. 81 .....	20, 63, 64, 65, 66, 68, 69, 70, 102, 209, 443
	s. 82 .....	134, 210, 439, 443
	s. 83 .....	210, 230, 231
	s. 84 .....	210, 230, 231, 447
	APPENDIX.....	211
62 & 63 Vict. c. 38.	(Telegraph Act, 1899) .....	112, 125, 127, 129, 219
63 & 64 Vict. c. 48.	(Companies Act, 1900) .....	12, 94, 238
63 & 64 Vict. c. 49.	(Town Councils (Scotland) Act, 1900).....	140
	s. 3.....	141
	s. 94 .....	140, 141
1 Edw. 7, c. 22.	(Factory and Workshop Act, 1901) .....	49, 52, 54, 102
	s. 1.....	54
	s. 19 .....	54, 192, 264
	ss. 20—22.....	54
	ss. 79, 149.....	52
2 Edw. 7, c. 35.	(Electric Lighting (Scotland) Act, 1902).....	88, 135, 140, 141, 231
	ss. 1, 2, 3 .....	153





## PART I.



### GENERAL VIEW OF THE LEGISLATION RELATING TO ELECTRIC LIGHTING.





# SYNOPSIS OF PART I.

Board of Trade may grant licence or order .....	Page	5
What is a licence .....	p.	5
Licences now seldom granted .....	p.	5
Board of Trade Annual Return .....	p.	5
Consent of Local Authority .....	p.	6
What is a Provisional Order .....	p.	6
Local Authority supplying outside district .....	p.	6
Special notice to Local Authority .....	p.	6
Confirmation of Order .....	p.	6
Confirmation may be opposed .....	p.	7
Repeal or Amendment of Order .....	p.	7
Resolution where Local Authority Undertakers .....	p.	7
Licence or Order—how applied for—memorial—public advertise- ments—deposits—objectors—competing applications—buying out of non-statutory companies—local inquiries—copies for sale	p.	7
Dates and periods to be observed .....	p.	10
No monopoly conferred .....	p.	12
Capital .....	p.	12
Area of supply .....	p.	18
Regulations inserted in Orders .....	p.	18
Electric Lighting (Clauses) Act, 1899 .....	p.	14
County of London excepted .....	p.	14
Regulations from time to time by Board of Trade .....	p.	14
Amendment of Regulations in 1901 .....	p.	15
Publication of Regulations .....	p.	15
Byelaws by Local Authorities .....	p.	16
Regulations under s. 4 of Act of 1888 .....	p.	16
Power of Local Authorities to borrow .....	p.	16
Loans under the Electric Lighting Act, 1882 .....	p.	16
Accounts and audit .....	p.	17
Joint Board .....	p.	18
Land .....	p.	18
Land for generating station .....	p.	18
Nuisance .....	p.	19
Breaking up streets .....	p.	21
Private land—railways—tramways .....	p.	21
Alteration of pipes and wires .....	p.	22
Different systems of supply .....	p.	22
Remedying of system and works .....	p.	23
Compulsory works .....	p.	23
Obligation to supply under the Electric Lighting Acts .....	p.	24
Maximum power which consumer may demand .....	p.	25
Penalty for failure to supply .....	p.	26
Constant supply .....	p.	26
Public lamps—supply of energy to .....	p.	26
Board of Trade may relieve Gas Undertakers .....	p.	27
Electric inspectors .....	p.	27
Duties of electric inspector .....	p.	27
Testing and inspection .....	p.	27

Meters .....	Page 28
When conclusive evidence .....	p. 29
Coin meters, free wiring and fittings .....	p. 29
Theft of coins from meter .....	p. 30
Cutting off supply .....	p. 30
No special form of lamp or burner .....	p. 30
Overhead wires .....	p. 30
London Overhead Wires Act, 1891 .....	p. 31
When Local Authority may contract .....	p. 33
Application of revenue of local authority .....	p. 33
Transfer of undertaking from company to local authority .....	p. 34
Variation from the forty-two years of the Act of 1888 .....	p. 34
Exceptional provision in case of County of London .....	p. 35
Transfer of undertaking from Local Authority to company .....	p. 35
Price for supply .....	p. 35
Varying prices or methods of charge .....	p. 36
Recovery of price .....	p. 37
Profits .....	p. 37
Protection of canals, etc. ....	p. 38
Compensation for damage .....	p. 38
Stealing electricity .....	p. 38
Power to enter premises .....	p. 38
Meters and fittings of Undertakers not subject to distress .....	p. 39
Protection of Postmaster-General .....	p. 39
Protection of telegraphic and telephonic wires .....	p. 39
Arbitration under the Lighting Acts .....	p. 39
Board of Trade Arbitrations, &c., Act, 1874 .....	p. 44
Revocation of Order under the Lighting Acts.....	p. 45
Penalties under the Lighting Acts .....	p. 46
Security for execution of works under the Lighting Acts .....	p. 49
Damages for accidents and injuries .....	p. 49
Notice of accidents and injuries .....	p. 49
Inquiry by Board of Trade .....	p. 49
Protection of Local Authority and officers from personal liability ..	p. 50
Public Authorities Protection Act, 1893 .....	p. 50
New denominations of standards—Volt, Ohm, Ampère .....	p. 51
Board of Trade unit .....	p. 52
Factory and Workshop Act, 1901 .....	p. 52
Enactment as to dangerous trades .....	p. 52
Electric accumulator works .....	p. 53
Recommendations of Dangerous Trades Committee ..	p. 58
Report of accidents .....	p. 54
Lime-washing .....	p. 54
Settled Land Acts .....	p. 54
Joint Committee of Lords and Commons on Electrical Energy (Generating Stations and Supply), 1898,—	
Questions submitted to .....	p. 55
Report of .....	p. 56
Compulsory powers and nuisance .....	p. 61
Legislation since report of Lord Cross's Committee .....	p. 62
Generating stations outside area of supply .....	p. 70
Supply of electrical energy in neighbouring district .....	p. 71
Supply of electricity for traction purposes .....	p. 72
As to supply of electricity where consumer has separate supply ..	p. 78
Corporation may refuse to supply electrical energy in certain cases	p. 78
Instances where Local Authority prevented from paying deficit on electric undertaking out of rates .....	p. 78
Discounts and Accounts .....	p. 74
Consent of Local Authority—instances where Board of Trade have dispensed with .....	p. 74

## GENERAL VIEW OF THE LEGISLATION RELATING TO ELECTRIC LIGHTING.

---

By the Electric Lighting Act, 1882, the Board of Trade are authorised to grant a licence or provisional order to a local authority, company, or person to supply electricity for public or private purposes within a defined area. See pp. 89—95.

Board of Trade may grant licence or order.

A licence does not require confirmation by Parliament, and it is granted for a limited time only; generally for a period not exceeding seven years. It is renewable from time to time for a like period upon such terms and conditions as the Board of Trade may determine (p. 89). Save as regards this limit of time, there used, prior to the passing of the Electric Lighting (Clauses) Act, 1899 (as to which, see *post*, p. 154), to be no difference in substance between the form of a licence and that of a provisional order.

What is a licence.

Electric lighting having passed beyond the experimental stage, licences are now rarely applied for, provisional orders being preferred. Looking to the advances made in electrical science of late years, the Board of Trade now discourage applications for licences; and, in the later instances where they have been granted, the period has been limited to two years.

Licences now seldom granted.

The last Board of Trade Return (Parliamentary Paper 280 of 1902) shows that from 1888 to June, 1901, inclusive, thirty-two licences in all had been granted, and that of these all except one had either expired or had been repealed, or revoked. From the same return, it appears that, during the period above mentioned—1888 to 1901—969 provisional orders had been applied for, 748 had been made by the Board of Trade, and 795 had been confirmed by Parliament. Of these 127 have since been revoked or repealed, thus leaving in full operation 608. The same return shows that during the succeeding year—that is, in anticipation of

Board of Trade annual return.

the Session of 1902—sixty-seven applications for provisional orders had been received—forty-five by local authorities, and twenty-two by companies or persons.

Consent of local authority when necessary.

By the Act of 1882, the consent of the local authority is required to the granting or renewing of a licence but not to the making of provisional orders. By the Act of 1888, however, provisional orders were placed in this respect on the same footing as licences, with this difference, that in the case of provisional orders power is given to the Board of Trade to dispense with such consent where refused, if they are of opinion that, having regard to all the circumstances of the case, such consent ought to be dispensed with. In such a case they are to make a special report, stating the grounds upon which they have dispensed with such consent (p. 144). For instances of such dispensation, see *post*, p. 75.\*

What is a provisional order.

The Board of Trade may, by provisional order, authorise any local authority, company, or person to supply electricity for public or private purposes within any defined area, for such period, whether limited or unlimited, as the Board of Trade may think fit (p. 92). In practice, no limit of time is inserted in provisional orders; but provisions are invariably made whereby they may be revoked in certain events. See p. 45.

When a local authority may supply outside their district.

A local authority may obtain power to supply electricity within the district of another local authority or part thereof (p. 90). As to supply in bulk, see *post*, p. 59.

Special notice to local authority of proposed area.

No provisional order shall authorise the supply of electricity by any undertakers within the district of any local authority (not being themselves the undertakers) unless notice that such provisional order has been or is intended to be applied for has been given to such local authority on or before JULY 1st in the year in which such application is made. Electric Lighting Act, 1882, s. 4 (1), p. 93.

---

\* See Report of Lord CROSS's Committee, *post*, p. 60, which recommends that the provisions of the Act of 1888, which require the consent of the local authority as a condition precedent to the granting of a provisional order, should be amended, and the Committee add, "In their opinion, the local authority should be entitled to be heard before the Board of Trade, but should not have, so to speak, a provisional veto, only to be dispensed with in special cases by the Board of Trade."

The Board of Trade may submit to Parliament for confirmation any provisional order granted by it; but any such order shall be of no force unless and until it is confirmed by Act of Parliament (p. 98).

Confirmation of provisional order by Parliament.

If, while the Bill confirming any provisional order is pending in either House of Parliament, a petition is presented against any order comprised therein, the Bill, so far as it relates to such order, may be referred to a select committee, and the petitioner shall be allowed to appear and oppose, as in the case of private Bills (p. 98).

Confirmation may be opposed.

Any Act confirming a provisional order may, on the application of the undertakers, be repealed, altered, or amended by any subsequent provisional order granted by the Board of Trade and confirmed by Parliament (p. 98).

Repeal or amendment of provisional order.

A local authority desiring to apply for a licence or provisional order must commence by passing a resolution at a special meeting of the local authority, and such special meeting shall only be held after one month's previous notice of the same and of the purpose thereof, has been given in the manner in which notices of meetings of such local authority are usually given. Electric Lighting Act, 1882, s. 3 (6), p. 90. Cf. Rule IV. as to consents (p. 235).

Preliminary resolution where local authority are undertakers.

All applications to the Board of Trade, whether for licences or provisional orders, must be made by a memorial addressed to the Board of Trade. This memorial must be accompanied by a draft of the proposed licence or order and a map (Rules VIII. to X., p. 236—238) and by various other documents; as to which, see Rule XI., at p. 238. There must also be deposited a "fee of 50*l.* by cheque payable to an assistant secretary of the Board of Trade to cover ordinary expenses. If in consequence of inquiries or otherwise additional expense is incurred, the amount will be charged to the applicants and must be paid by them in addition to the ordinary fee" (Rule XI. (7), p. 238).

Application for licence or order—how made.

If the whole or any part of the proposed district is already being supplied with electricity under statutory authority by any local authority, company, or person, special notice must have previously been given to them or him (Rule V., p. 236).

Notices.

Notice must also have been given to the public by advertisements published in the case of a provisional order, during OCTOBER and NOVEMBER (p. 241). As to licence, see Rules XIII. and XIV., pp. 239, 240. These advertisements must contain the following particulars :—

- (1.) The objects of the application.
- (2.) The address and description of the applicants.
- (3.) A description of the proposed area of supply.
- (4.) The names of the streets in which it is proposed that electric lines should be laid down within a specified time.
- (5.) A list of the streets not repairable by a local authority and of the railways and tramways (if any) which the applicants propose to take powers by the licence or order to break up.
- (6.) The address of an office in London, and another office within the proposed area of supply, at which printed copies of the draft licence or order when applied for and of the licence or order when made, can be obtained at a price of not more than one shilling each.
- (7.) The time within which and the manner in which objections may be made.

Further as to this advertisement and the particulars to be contained therein see Rule XIII., p. 239.

How  
objectors  
must proceed.

Every local or other public authority, company, or person desirous of bringing before the Board of Trade any OBJECTION respecting the application for a licence or provisional order, must do so by letter in the case of a provisional order on or before JANUARY 15TH next ensuing, and in the case of a licence, within two months from the date of the newspaper containing the first advertisement of the application; and if they desire to have ANY CLAUSES OR OTHER AMENDMENTS inserted in the licence or order they must deliver the same to the Board of Trade. A copy of any such objection and of any such clauses or other amendments must also be served on the parliamentary agents or solicitors for the licence or order (Rule XIV., p. 240).

Competing  
applications.

In case of competing applications to supply a particular district from the local authority of that district and from any

other authority, company, or person, the Board of Trade will give a preference to the application of the local authority of the district "in every case where, in the opinion of the Board of Trade, no special circumstances exist which render such a preference inexpedient" (p. 241).

In 1899, applications were respectively made for provisional orders by the Leamington Corporation and by a company then supplying energy in the borough under an agreement with the corporation. The Board of Trade report, dated June 19th, 1899, [1899, 237] states, "The Board of Trade directed a local inquiry to be held with respect to these applications. After consideration of the report made by the inspector appointed to hold the inquiry, the Board of Trade decided to grant an order to the corporation, subject to the provision that the order shall not come into force unless the corporation, within twelve months from the date of the passing of the Act confirming the order, offer to purchase the undertaking of the company (who are supplying energy in the borough under agreement with the corporation), on terms specified in the order. The Board of Trade refused to proceed with the application of the company." See the *Felixstowe Case*, cited *post*, p. 112.

Buying out of  
non-statutory  
companies.

In cases of applications for a licence, renewal of a licence, or provisional order, to which objection is made by any person locally interested, the Board of Trade will, if they consider it expedient, hold a local inquiry, of which due notice will be given (p. 242).

Local  
inquiries by  
Board of  
Trade.

When a licence or provisional order has been granted by the board, printed copies for public inspection must be deposited in the offices referred to in Rule X., and the applicants must supply copies for sale to all persons applying for the same at a price of not more than one shilling each, and must further publish the same as the Board of Trade may direct; and, where a map is referred to in any licence or order, certain conditions in this respect must be complied with (Rules XV. and XVI., p. 240).

Proceedings  
after licence  
or order  
granted.

Dates and periods to be observed.

From the following summary the steps to be taken and the dates and periods to be observed will appear:—

(1.) *In the case of a Provisional Order.*

In the case of a provisional order.

- (a.) Where the local authority are undertakers, an essential preliminary step is a resolution passed at a special meeting held after one month's notice. See Act of 1882, s. 3 (6), p. 90.
- (b.) On or before JULY 1ST. Notice by promoters to the local authority of a district proposed to be supplied \* (Act of 1882, s. 4 (1), p. 93).
- (c.) On or before NOVEMBER 1ST. Special notice in writing to every local authority, company, or person authorised to supply electricity under statutory powers within the district to which the proposed order refers (Rule V., p. 236).
- (d.) OCTOBER and NOVEMBER. Notices by public advertisement of the application for and the objects of the provisional order (Rule XVII. (1), p. 241).
- (e.) On or before NOVEMBER 30TH. Deposit with Board of Trade, Clerk of the Peace, etc., map of the district (Rule X., p. 238), and also copy of public advertisement (Rule XVII. (2), p. 241). Also deposit in the Private Bill Office and with the Clerk of the Parliaments, duplicates of plans, etc. (Standing Order 39 of House of Lords, and Standing Order 39 of House of Commons.)
- (f.) On or before DECEMBER 21ST. Lodge memorial for provisional order with Board of Trade with draft of order and various other deposits (Rule XVII. (3), p. 241, and Rules VIII.—XI., pp. 236—238).
- (g.) THREE MONTHS. A provisional order shall not be granted by the Board of Trade until after the expiration of a period of three months from the date of the first publication of the public advertisement, nor until opportunity

---

\* This does not apply in the case of a local authority seeking to supply its own district, but it does apply to the case of a local authority seeking to include in its area of supply the district of another local authority or part thereof. See Rule VI., p. 236.



has been given to all parties interested to make representations or objections to the Board of Trade with reference to the application (Act of 1882, sections 3 and 4, pp. 89—93).

- (h.) JANUARY 15TH. The parliamentary agents or solicitors must be prepared to prove compliance with the Electric Lighting Acts and the Board of Trade rules by this date; and the proofs must be completed on or before February 22nd (Rule XVII. (4), p. 241).
- (i.) FEBRUARY 22ND. Last day for proving compliance as above. Six days' previous notice of the day and hour of attendance must be given (*ibid.*).

Proof of the consent of local authority or request for dispensation therewith must "within the time limited for proving compliance" be deposited with the Board of Trade (Rule II., p. 235).

The consent of the local authority can be given only at a meeting held after previous notice of the same and of the purposes thereof (Rule IV., p. 235).

(2.) *In the case of a Licence.*

The undertakers, if a local authority, must have passed the required resolution after a month's notice as in the case of a provisional order. Act of 1882, section 3 (6), p. 90. In the case of a licence.

The memorial may be lodged at any date.

At the time of lodging the memorial, notice in writing must be given to every local authority, company or person authorised to supply electricity under statutory powers within the district to which the proposed application refers (Rule V., p. 236).

As to the necessary public advertisements, see Rule XIII., p. 239.

TWO MONTHS from the date of the newspaper containing the first advertisement of the application is the date on or before which objections must by letter be sent to the Board of Trade (Rule XIII., p. 240).

THREE MONTHS (as in the case of a provisional order) must elapse from the date of the first publication of the public advertisement of the application for the licence before any licence can be granted. Act of 1882, section 3 (5), p. 89.

The necessary consent of the local authority can be given only at a meeting held after ONE MONTH'S previous notice of the same, and of the purposes thereof (Rule IV., p. 235).

No monopoly  
conferred.

Neither a licence nor a provisional order confers any monopoly. The Act of 1888, section 1, expressly provides that "The grant of authority to any undertakers to supply electricity within any area, whether granted by licence or by means of a provisional order, shall not in any way hinder or restrict the granting of a licence or provisional order to the local authority, or to any other company or person within the same area" (p. 144). Within the metropolitan area there are many instances of competition and overlapping, as to which see Chapter on COUNTY OF LONDON, *post*, p. 303. On the other hand, there are many instances where the Board of Trade have refused to make provisional orders in the County of London and also in the Provinces where the proposed area of supply is already being served by authorised undertakers. For instances of the first see the cases of *Bermondsey* and *Southwark* respectively, at p. 8 of Board of Trade Report, Parliamentary Paper 230 of 1902. For instances of the second see the cases of *Bournemouth* and *Chiswick*, at p. 7 of the same report.\*

Capital.

There is no clause in provisional orders fixing any amount of capital. Where the undertakers are a local authority, the Act of 1882 authorises them to borrow, and that power they must exercise with the consent of the Local Government Board. Where the undertakers are a company, their capital is governed by their memorandum of association under the Companies Acts, 1862 to 1900. In the case of a company the undertakers have to satisfy the Board of Trade (see pp. 49, 159) that they are in a position fully and efficiently to discharge the duties and obligations imposed on them by the order, and they

\* The object of the Bermondsey order was to obtain an extension covering the parish of Rotherhithe. In 1902 Bermondsey succeeded in obtaining an order for this purpose, on conditions as to which see *post*, pp. 73, 74.

have, further, to deposit or secure a sum of money to the satisfaction of the Board of Trade. As to Power Bills see the chapter under that head, *post*.

A clause is always inserted in provisional orders limiting the area of supply—generally by reference to a schedule. Section 4 of the schedule to the Electric Lighting (Clauses) Act, 1899, provides that the undertakers shall not at any time after the commencement of the special order supply energy or (except for the purposes of that order) erect or lay down any electric lines or works beyond the area of supply otherwise than under the authority of Parliament or under a licence granted by the Board of Trade under the Electric Lighting Acts. Power of revocation is given to the Board of Trade in case of contravention of this prohibition. Before the passing of the Act of 1899 a like prohibition and power of revocation was generally inserted in provisional orders in favour of provincial companies and (latterly) in County of London orders whether in favour of companies or local authorities. See *post*, p. 158. As to supply in bulk see *post*, p. 59.

Area of supply.

The Act of 1882, section 6, provides that the undertakers shall be subject to such regulations and conditions as may be inserted in any licence, order, or special Act affecting their undertaking with regard to the following matters :—

Regulations to be inserted in licences or orders.

- (a.) The limits within which and the conditions under which a supply of electricity is to be compulsory or permissive ;
- (b.) The securing a regular and efficient supply of electricity ;
- (c.) The securing the safety of the public from personal injury, or from fire or otherwise ;
- (d.) The limitation of the prices to be charged in respect of the supply of electricity ;
- (e.) The authorising, inspection, and inquiry from time to time by the Board of Trade and the local authority ;
- (f.) The enforcement of the due performance of the duties of the undertakers in relation to the supply of electricity by the imposition of penalties or otherwise, and the revocation of the licence, order, or special Act, where the undertakers have, in the opinion of the Board of Trade, practically failed to carry the powers granted to

them into effect within a reasonable time, or discontinued the exercise of such powers ; and

(g.) Generally with regard to any other matters in connection with the undertakings.

Electric  
Lighting  
(Clauses) Act,  
1899.

The regulations above referred to were necessarily elaborate and lengthy, and used greatly to swell the bulk of a provisional order. To prevent the repetition of these in each order the Electric Lighting (Clauses) Act, 1899 (62 & 63 Vict. c. 19), was passed—"An Act for incorporating in one Act certain provisions usually contained in Provisional Orders made under the Acts relating to Electric Lighting." This Act came into operation on October 1st, 1899. It enacts that the provisions contained in the schedule to the Act shall be incorporated with and form part of every provisional order made by the Board of Trade after the commencement of that Act under the Electric Lighting Acts save so far as they are expressly varied or excepted by the order, and shall, subject to such variations or exceptions, apply so far as applicable to the undertaking authorised by the order. See p. 154.

County of  
London  
excepted.

The Act provides (section 2 (2)) that—"Except so far as any of the provisions contained in the schedule to this Act are incorporated with any provisional order made by the Board of Trade under the Electric Lighting Acts extending to the county of London, or with any special Act so extending, this Act shall not apply to the county of London." See p. 155.

Regulations  
from time to  
time by  
Board of  
Trade.

Over and above the regulations and conditions required by the first part of section 2 to be inserted in the licence, order, or special Act, the Board of Trade are, by a proviso to the same section, authorised to make, from time to time, such regulations as they may think expedient for securing the safety of the public from personal injury or from fire or otherwise, and from time to time to amend or repeal any regulations which may be contained in any such licence, order, or special Act in relation thereto (see p. 95). The regulations now in use were settled by the Board of Trade after a conference with undertakers and others concerned, held on November 19th and 20th, 1895. This conference was attended by thirty-six representatives of companies supplying electricity, and fifty-six representatives of local authorities supplying electricity, besides representatives sent from various

public bodies and associations. The object of the conference was thus stated at the outset by the late Sir COURTENAY BOYLE, K.C.B., on behalf of the Board of Trade: "The Board of Trade, finding it necessary to revise the regulations made by them under the provisions of the Electric Lighting Acts of 1882 to 1890, have thought it convenient, as well as courteous, to give to all those interested in those regulations who have raised any objections thereto, an opportunity of stating what those objections are, or of supporting their objections by verbal arguments, and of thereby ensuring that the Board of Trade's decision will be come to after carefully hearing all that can be said upon the various subjects dealt with in the regulations."\* These regulations are only a model, from which from time to time, as occasion demands, special regulations are settled and issued for each local authority, company, or individual. See p. 248.

These regulations were amended by the Board of Trade in an important particular in 1901, after a conference with local authorities, undertakers, and others interested. Before that date Regulation B. No. 6 contained the following proviso: "Provided that no change shall be made in the pressure of the supply to any premises which at the date of these Regulations are supplied with energy by the undertakers except with the consent of the consumer." Such a change may now be made with the consent of the local authority, and without the consent of the consumer, subject to appeal to the Board of Trade. See more fully at pp. 255, 259.

Amendment  
of regulations  
in 1901.

The Board of Trade Regulations for the time being in force must within one month after they have come into force, as made or last altered, be printed at the expense of the undertakers; and a true copy thereof, certified by or on behalf of the undertakers, shall be kept by the undertakers at their principal office within the area of supply and supplied to any person demanding them at a price not exceeding sixpence for each copy; and where the local authority are not themselves the undertakers a like copy must also be forthwith served upon the local authority. The undertakers are liable to a penalty on default (section 70 of the schedule to the Electric Lighting (Clauses) Act, 1899, p. 205).

Publication of  
regulations.

---

\* A shorthand report of the proceedings of the conference was printed for the Stationery Office, and may be purchased from Messrs. Eyre & Spottiswoode.

Local  
authorities  
may make  
byelaws.

In addition to the regulations authorised to be made by the Board of Trade, section 6 of the Act of 1882 authorises any local authority within any part of whose district electricity is authorised to be supplied under any licence, order, or special Act, to from time to time make, rescind, alter, or repeal byelaws for further securing the safety of the public, any such byelaws being subject to confirmation by the Board. Up to the present time no such byelaws have been made and confirmed. See p. 95. The byelaws so provided for are intended to meet cases in which local authorities are not themselves the undertakers. Where local authorities are themselves the undertakers, they have, by special Acts of Parliament, obtained power in many cases to make byelaws or regulations—generally spoken of as wiring regulations—without the necessity of having the same first approved by the Board of Trade, but in later cases this approval is insisted upon in all cases by Parliament. See further on the subject, *post*, p. 96.

Regulations  
in the case of  
electric lines  
not having  
parlia-  
mentary  
authority.

At the time of the passing of the Act of 1888 many electric lines and works existed and were in operation without the authority of any licence, order, or special Act, and they thus escaped all regulation on the part of the Board of Trade in the interests of the public. The Electric Lighting Act, 1888, s. 4, placed all such works under the control of the Board of Trade, by giving the Board power to make regulations in regard thereto. This section applies also to all unauthorised lines and works which have been started since. See these regulations at p. 261.

Power of  
local  
authorities  
to borrow.

Where the local authority are the undertakers, sections 7 and 8 of the Act of 1882 provide how their expenses are to be borne, and give them power to borrow money at interest. See pp. 97, 98.

The following extract from the Annual Report of the Local Government Board for 1900—1901 shows the extent to which local authorities have become undertakers of electric lighting:—

Loans under  
the Electric  
Lighting Act,  
1882.

It is interesting to note the remarkable increase during the last few years of the amounts required by town councils and urban district councils for purposes of the Electric Lighting Act, 1882. During the year 1900 we sanctioned loans of this character exceeding in the aggregate those for the previous year by £688,457, and

those for 1898 by nearly £2,000,000. The amount was in fact Loans—*contd.* greater than the total of all loans sanctioned for purposes of electric lighting during the nine years preceding 1897. The following table gives further particulars :—

Year.	Amount of Loans Sanctioned under the Electric Lighting Act, 1882.
	£
1888 .....	20,000
1889 .....	Nil.
1890 .....	62,500
1891 .....	115
1892 .....	315,545
1893 .....	773,722
1894 .....	357,886
1895 .....	515,543
1896 .....	796,588
1897 .....	964,837
1898 .....	1,058,164
1899 .....	2,390,235
1900 .....	3,023,692
Total.....	£10,278,827

Parliamentary Paper, 1901, Cd. 746, p. cxxi.

In the Annual Report of the Local Government Board for 1901—2 it is stated the amount of loans to local authorities sanctioned for the purposes of the Electric Lighting Act, 1882, during the year 1901 was £3,995,459. Parliamentary Paper, Cd. 1281, p. cxvii.

From the Board of Trade return [Parliamentary Paper, 1902, 310] it appears that down to 31st March, 1901, the amount of loans authorised to be borrowed by local authorities was £14,620,787. From another return [Parliamentary Paper, 1902, 311] it appears that the total capital of companies authorised to supply electricity down to the end of the year 1900 was £10,744,944. These figures are confined to electric lighting, and take no account of electric traction, or of the many electrical enterprises existing without statutory authority. Mr. Charles Hawksley, late President of the Institution of Civil Engineers, in his presidential address delivered November, 1901, stated: "It may be of interest to state that, although electricity is the youngest of the sciences, upwards of £130,000,000 of capital have already been invested in this country alone in electrical undertakings" (*Electrician*, November 8th, 1901, p. 101).

**Accounts and audit.**

Accounts must be kept by all undertakers, whether local authorities, or companies, or individuals. The Board of Trade are authorised, and have prescribed the form of such accounts. These accounts must be published in such manner as may be from time to time prescribed in that behalf by the Board of Trade. The undertakers must sell a copy to any applicant at a price not exceeding one shilling, under penalty upon default not exceeding forty shillings. Provision is made for the audit of the accounts both of local authorities and companies or persons. See further, pp. 189 and 160.

**Joint Board.**

The Stalybridge, Hyde, Mossley and Dukinfield Tramways and Electricity Board Act, 1901 (1 Edw. 7, c. cxcv.), affords an illustration of the combination of several smaller local authorities for the purpose of carrying out schemes involving the generating and distributing of electrical energy. That Act constituted a Joint Board consisting of representatives from the various councils interested, and authorised the taking of land compulsorily for the purposes of the Act, the construction of tramways to serve the districts interested to be worked (with the sanction of the Board of Trade) by electrical energy. The Act further incorporates the Electric Lighting (Clauses) Act, 1899 (with the exception of certain sections), and makes special provision for the application of tramway revenue and electricity revenue respectively.

**Land.**

With regard to the acquisition of land, the policy of the Electric Lighting Acts is against the acquisition of land by compulsion. The power given is for the acquisition of land by agreement only. The quantity, however, is in no way limited so far as the Electric Lighting Acts are concerned. When, however, a provisional order is made in favour of a local authority, the quantity of land which they may acquire and use is limited to five acres; and in orders in favour of companies, a clause is inserted providing that, in case of transfer to the local authority, that limit shall obtain. "Land" for the purposes of the Electric Lighting Acts includes easements. See further, pp. 101 and 107.

**Land for generating station.**

The question whether power should be given to undertakers to acquire land for generating stations compulsorily was one of those referred to a joint committee of the House of Lords and House



of Commons in 1898. The Committee reported in favour of such power being given. No public legislation has as yet followed on this. The subject is further dealt with later on. See further, p. 56—8. Compulsory powers to acquire lands for generating stations are now frequently to be found in Acts. In the Model Bills and Clauses, as amended 1902, a model clause applicable to railways will be found under the head of "Railway (Electrical Power)."

In the case of *Geddis v. Proprietors of Bann Reservoir* (1878), Nuisance.  
3 App. Cas. 480, Lord BLACKBURN thus laid down the law: "It is now thoroughly well established that no action will lie for doing that which the Legislature has authorised, if it be done without negligence, although it does occasion damage to anyone; but an action does lie for doing that which the Legislature has authorised, if it be done negligently. And I think that if by a reasonable exercise of the powers either given by statute to the promoters or which they have at common law, the damage could be prevented, it is, within this rule, negligence not to make such reasonable use of their powers."

It is in accordance with this principle that in the case of railways it was decided that no damages or compensation could be recovered from a railway company in respect of damage or nuisance arising from vibrations (without negligence) by the passing of trains after the railway is brought into use (*Brand v. Hammersmith and City Rail. Co.* (1868), L. R. 4 H. L. 171).

Where Parliament intends that the law, as stated by Lord BLACKBURN, should not operate, a clause is inserted in the special Act or Provisional Order, as the case may be, to the effect that nothing therein shall prevent the undertakers from being liable to an indictment or other legal proceeding for nuisance. Such a clause occurs in both the Gasworks Clauses Acts of 1847 and 1871. It does not occur in the Waterworks Clauses Acts, and it does not occur in the Tramways Act of 1870. (See *National Telephone Co. v. Baker*, [1898] 2 Ch. 186, *post*, p. 102, and *post*, p. 389.) Nor is the nuisance clause to be found in the Electric Lighting Acts of 1882 and 1888. It had been customary, however, for the Board of Trade to insert such a clause in Provisional Orders authorising electric undertakings. Among the questions

Nuisances  
—*contd.*

referred to the Joint Select Committee of the House of Lords and of the House of Commons in 1898 on Electric Energy (Generating Stations and Supply), presided over by Lord Cross, was—

- (1) “ Whether, notwithstanding the provisions of section 12 (1) of the Electric Lighting Act, 1882, powers should be given in any cases for acquiring land compulsorily for generating stations ; and, if so, under what conditions as respects liability for nuisance, notices to surrounding owners, and otherwise.”

The Committee, having heard witnesses, reported, as regards the question of nuisance, as follows :—

- (d) “ With respect to liability for nuisance, they are of opinion that where the site for a generating station is acquired under compulsory powers, and is specified in the Provisional Order or special Act, the undertakers should not be subjected to any further liability than that which, according to Lord BLACKBURN (*Geddis v. Bann Reservoir*, 3 App. Cas. 455), is imposed by the common law in the case of persons exercising statutory powers and duties. On the other hand, where the site for a generating station is acquired by agreement, they think the undertakers ought to be subject to the liability imposed by the common law.”

No legislative step has yet been taken to carry out by public general legislation the recommendation of the Committee. Since the Report of the Committee, the Electric Lighting (Clauses) Act, 1899, has been passed, and by section 81 of the schedule thereto it is provided that “ Nothing in the special Order shall exonerate the undertakers from any indictment action or other proceedings for nuisance in the event of any nuisance being caused or permitted by them.” See *post*, p. 209. Where the promoters have proceeded by Bill to acquire lands for a generating station that power has been given by Parliament in many cases, and in most cases that power has not been accompanied by the nuisance clause. See more fully, *post*, pp. 61—70.

It should be observed that the recommendation of the Committee does not apply to generating stations generally, but only to generating stations on sites acquired under compulsory powers. The reason of the distinction in the case of a site acquired by agreement is that, in that case, neighbours receive no parliamentary notices, and have therefore no opportunity to be heard to protect themselves. It was held in the case of the *London, Brighton, and South Coast Rail. Co. v. Truman* (1885), 11 App. Cas. 45, that a railway company which had a clause authorising them to purchase additional land to a limited extent by agreement so purchased a piece of land and used the same for keeping cattle, and they were held not liable for nuisance created in the absence of negligence. Since that decision, whenever a railway or other company obtains from Parliament the power to acquire by agreement a limited amount of land for extraordinary purposes, a rider is always added to the effect that nothing therein shall exempt the company from indictment or other proceeding for nuisance caused or permitted upon any land so taken.

Nuisances  
—*contd.*

The Act of 1882 incorporates those portions of the Gasworks Clauses Act, 1847, with respect to the breaking up of streets for the purpose of laying pipes, and from time to time repairing, altering, or removing the same. See pp. 106, 107, and 212 *et seq.*

Power to  
break up  
streets.

Section 7 of the Gasworks Clauses Act, 1847, to the effect that nothing therein contained should authorise or empower the undertakers to lay down or place any pipe or other works into, through, or against any building or in any land not dedicated to the public use, without the consent of the owners and occupiers thereof, is incorporated with the Electric Lighting Act, 1882. That Act also provides (section 13) that the undertakers may not break up any street which is not repairable by the local authority, or any railway or tramway without consent, unless in pursuance of special powers in that behalf, inserted in the licence, order, etc., or with the written consent of the Board of Trade. On this subject, see further, pp. 108, 170, and 179. Provisional orders generally contain a schedule setting forth a list of streets not repairable by the local authority, as also portions of railways and tramways which may be broken up in pursuance

Private land.

Private street.  
Railway or  
tramway.

of the special powers granted by the order. As to Power Acts, see the chapter on that subject.

Alteration of  
pipes and  
wires under  
streets.

In order to lay their wires under streets authorised to be broken up, the undertakers may have to deal with existing pipes or wires already placed in such streets. To meet this difficulty, section 15 of the Act of 1882 confers powers on the undertakers, where such pipes or wires interfere with the exercise of their powers, to effect their alteration, subject to compensation and arbitration. Section 17 of the Schedule to the Electric Lighting (Clauses) Act, 1899, sets out in detail the procedure to be observed by the undertakers in order to carry out the powers conferred in this respect. See pp. 113 and 174.

Different  
systems of  
supply.

The late Major Sir FRANCIS A. MARINDIN, K.C.M.G., R.E., in the spring of 1889, held an inquiry by direction of the Board of Trade, into the applications for provisional orders and licences then under promotion in respect to the metropolis. There were thirteen such orders, two licences, and one Bill. The inquiry was held in the Town Hall, Westminster, and occupied eighteen days. (See Report dated June, 1889; Parliamentary Paper 189 of 1889.) As the several companies applying for orders were more or less committed to the supply of electricity by one or other of several different systems, the inquiry was, for the most part, directed to the relative advantages and disadvantages of the different proposed modes of supply. The Report (p. 16) states, "This question was the one which was most keenly contested at the inquiry, and the great bulk of the evidence was directed more to the attack and defence of the rival systems than to the question of competition, or to the size of area, which, however, should depend greatly on the system used." These systems may be summarised as (1) the supply by means of high pressure alternating currents, and transformers; and (2) the direct supply by means of continuous currents. As to the relative advantages and disadvantages of these systems, see the views of Major CARDEW, R.E. (then electric adviser to the Board of Trade), as stated on pp. 17 and 18 of the Report.

The Board of Trade do not restrict undertakers to any particular system of supply. Section 10 of the Schedule to the

Electric Lighting (Clauses) Act, 1899, provides that "The energy shall be supplied only by means of some system approved in writing by the Board of Trade, and subject to the Board of Trade Regulations." See p. 163. As to Power Acts, see the chapter on that subject.

If at any time it is established to the satisfaction of the Board of Trade that (a) the undertakers are supplying energy otherwise than by means of a system approved by the Board, or (except in accordance with the provision of the order) have permitted any parts of their circuits to be connected with earth or placed any electric line above ground; or (b) that any electric lines or works of the undertakers are defective, so as not to be in accordance with the order and Board of Trade Regulations; or (c) that any work of the undertakers or their supply of energy is attended with danger to the public safety or injuriously affects any telegraphic line of the Postmaster-General, the Board of Trade may require the undertakers to abate or discontinue the same within a limited period. If the undertakers make default in complying with the order, they are liable to a penalty. In any case of non-compliance with such an order of the Board of Trade, the provisional order is liable to revocation. See section 69 of the Schedule to the Electric Lighting (Clauses) Act, 1899, p. 205. As to Power Acts, see the chapter on that subject, *post*.

Remedying  
of system  
and works.

The third schedule of the new form of provisional order (see p. 238) contains a list of the streets throughout which the undertakers must, within two years, lay down suitable and sufficient distributing mains for the purposes of general supply. In addition to the mains above referred to, the undertakers are bound at any time after the expiration of eighteen months after the commencement of the order, to lay down suitable and sufficient distributing mains for the purposes of general supply throughout every other street or part of a street within the area of supply upon being required to do so by requisition (section 21 of the Schedule to the Electric Lighting (Clauses) Act, 1899, p. 181).

Compulsory  
works.

Upon default the undertakers (not being a local authority) are liable to a penalty for each day's default, and if the Board of Trade are of opinion, in any case, that such default is wilfully and unreasonably prolonged, the order is liable to be

revoked, and where the undertakers are a local authority, the order is also liable to revocation (section 23 of the Schedule to the Electric Lighting (Clauses) Act, 1899, p. 182). The requisition may be made by six or more owners or occupiers of premises, or by the local authority having the control and management of the public lamps. On receiving the requisition, the undertakers may insist upon an agreement or guarantee, and arbitration is provided for in case of difference. See section 24 of above-mentioned Schedule, p. 183.

Obligation  
to supply  
under the  
Lighting  
Acts.

A provisional order having been obtained and distributing mains laid, consumers are entitled to demand, and the undertakers are bound to furnish, a supply of electricity subject to the conditions laid down by the Electric Lighting Acts, the Electric Lighting (Clauses) Act, 1899, and the provisional order. Section 19 of the Act of 1882 provides that where a supply of electricity is provided in any part of an area for private purposes, then, except in so far as is otherwise provided, every company or person within that part of the area shall, on application, be entitled to a supply on the same terms on which any other company or person in such part of the area is entitled under similar circumstances to a corresponding supply. It is further provided by section 20, that the undertakers shall not, in making any agreements for the supply of electricity, show any undue preference to any local authority, company, or person. Section 27 of the Schedule to the Electric Lighting (Clauses) Act, 1899, provides that the undertakers shall, upon being required to do so by the owner or occupier of any premises within fifty yards from any distributing main of the undertakers in which they are for the time being required to maintain or are maintaining a supply of energy for the purposes of general supply to private consumers, give and continue to give, a supply of energy for those premises, and shall furnish and lay any electric lines that may be necessary for the purpose of supplying the maximum power to which such owner or occupier is entitled. This is subject to conditions which may be summed up as follows:—(1) the consumer must pay (if required) the cost of so much of the electric line as may be laid upon his premises, and of so much

No undue  
preference.

of any such electric line as it may be necessary to lay for a greater distance than sixty feet from the distributing main although not on such premises; (2) the owner or occupier requiring the supply must serve a notice upon the undertakers specifying the premises and the maximum power required, and a reasonable date upon which the supply is required to commence; (3) he must enter into a written contract\* with the undertakers (if required) to take and pay for a supply for at least three years† of such an amount that the payment to be made for the same at the rates being charged to ordinary consumers shall not be less than twenty per cent. on the outlay incurred by the undertakers; and he must also give, if required, security for moneys which may become due. This security may be required even after the undertakers have begun to give a supply of energy; but the undertakers must give seven days' notice. The undertakers are not compellable to give a supply of energy to any premises unless they are reasonably satisfied that the electric lines, fittings, and apparatus therein are in good order and condition and "not calculated to affect injuriously the use of energy by the undertakers or by other persons." Any difference as to any improper use of energy or as to any alleged defect in any electric lines, fittings, or apparatus, is to be determined by arbitration, the arbitrator being appointed by the Board of Trade. See pp. 185—186.

Obligation to supply—  
*contd.*

The maximum power which any consumer shall be entitled to demand "shall be of such amount as he may require to be supplied with, not exceeding what may be reasonably anticipated as the maximum consumption on his premises." The consumer may alter that maximum upon giving a month's notice and paying any expenses reasonably incurred by the undertakers in respect of the service lines or any fittings or apparatus of the undertakers upon the premises, consequent upon such alteration. These expenses may be recovered summarily as a civil debt. Any difference as to what may be reasonably anticipated as the consumption on the premises

Maximum power which consumer may demand.

\* See *Husey v. London Electric Supply Corp. Limited*, [1902] 1 Ch. 411, cited *post*, p. 118.

† See further, p. 184.

or as to the reasonableness of the expenses is to be determined by arbitration. See section 28 of the Schedule to the Electric Lighting (Clauses) Act, 1899, p. 187. As to the Powers Acts, see the chapter on that subject.

Penalty for failure to supply.

Penalties are imposed for default in supplying energy to any owner or occupier of premises to whom the undertakers are required to supply energy under the provisional order. See section 80 of the above-mentioned Schedule, p. 187.

Constant supply to be afforded.

After commencing to supply energy through any distributing main, the undertakers are required by the Board of Trade Regulations to maintain a supply of sufficient power for the use of all the consumers for the time being entitled to be supplied from such main, and such supply must be constantly maintained subject to certain exceptions and conditions, as to which, see Board of Trade Regulation 2 of heading B, at p. 254. As to Power Acts, see the chapter on that subject.

Supply of energy to public lamps.

Where the local authority are not themselves the undertakers, the undertakers must, upon receiving reasonable notice from the local authority requiring them to supply energy to any public lamps within a distance of seventy-five yards from any distributing main of the undertakers, in which they are for the time being required to maintain a current of energy for the purposes of general supply under the special order or the Board of Trade Regulations, give and continue to give a supply of energy to those lamps in such quantities as the local authority may require to be supplied (section 29 of Schedule to Electric Lighting (Clauses) Act, 1899). Where the local authority are not themselves the undertakers, the price to be charged by the undertakers for energy supplied to public lamps, and the mode in which such charges are to be ascertained, may be settled by agreement between the local authority and the undertakers, and, in case of difference, by arbitration, regard being had to the circumstances of the case, and the distributing and other mains (if any) which may have to be laid for the purpose, and the prices charged to ordinary consumers in the district. See section 34 of above-mentioned Schedule. Penalties are imposed for default. See section 80 (2) of above-mentioned Schedule, p. 187.



The principle of requiring the undertakers to supply electricity to consumers (under the conditions above referred to) is taken from the Gasworks Clauses Acts, gas companies being bound (under specified conditions) to supply gas under penalty. Where electricity competes with gas in a given area, and the supply of gas in that area has ceased to be remunerative, the Board of Trade are empowered to relieve the gas undertakers from their obligation. The conditions and machinery under which relief may be obtained are provided by section 29 of the Act of 1882. See p. 132.

Board of Trade may relieve gas undertakers from obligation to supply gas in certain cases.

Provision is made for the appointment of one or more competent and impartial person or persons to be electric inspectors. Where the undertakers are a local authority, inspectors are appointed by the Board of Trade on the application of any consumer or of the undertakers. Where the undertakers are a company, the local authority appoint the electric inspectors. In all County of London Orders the County Council appoint. See p. 191.\*

Electric inspectors.

The duties of an electric inspector include (a) the inspection and testing, periodically and in special cases, of the undertakers' electric lines and works, and the supply of energy given by them, (b) the certifying and examination of meters, (c) such other duties in relation to the undertaking as may be required of him under the provisions of the Special Order or of the Board of Trade Regulations. See section 36 of Schedule to Electric Lighting (Clauses) Act, 1899, p. 191. Their remuneration is provided for by sections 37 and 48 of same Schedule. The Board of Trade have power to appoint any electric inspector or other fit person or persons to inquire and report as to the cause of any accident affecting the safety of the public, or as to the manner and extent in and to which the provisions of the Order, Electric Lighting Acts and Board of Trade Regulations have been complied with, so far as those provisions affect the safety of the public. See section 38, p. 192.\*

Duties of electric inspectors.

Elaborate provisions are made for testing the mains and works of the undertakers. On the occasion of the testing of any main of the undertakers by the electric inspector, reasonable notice

Testing and inspection.

---

\* As to Power Acts, see the chapter on that subject, *post*.

Testing and  
inspection  
—*contd.*

thereof must be given to the undertakers, and the testing must be at such suitable hours as, in the opinion of the inspector, will least interfere with the supply of energy by the undertakers. Provision is made for the establishment of testing stations, and the placing thereof of proper and suitable instruments. Any consumer, on payment of a fee prescribed by the Board of Trade, may require an electric inspector to test the variation of electric pressure at the consumer's terminals, or make any other such inspection and testing of the service lines, apparatus, and works of the undertakers upon the consumer's premises, as may be necessary for determining whether the undertakers have complied with the provisions of the special order and the Board of Trade Regulations. An electric inspector must on the day following that on which any testing has been completed by him, make and deliver a report of the results of his testing to the authority or person by whom he was required to make such testing, and also to the undertakers, and such report shall be receivable in evidence.

Report of  
inspector.

Appeal to  
Board of  
Trade.

An appeal lies to the Board of Trade, who may thereupon inquire into the matter and decide. See sections 39—48 of the Schedule to the Electric Lighting (Clauses) Act, 1899, pp. 193—196.\*

Meters.

The amount of energy supplied by the undertakers to any ordinary consumer under the special order, or the electrical quantity contained in the supply, or "value of the supply" (according to the method by which the undertakers elect to charge), must (except as otherwise agreed between the consumer and the undertakers) be ascertained by means of an appropriate meter duly certified under the provisions of the special order (section 49 of the Schedule to the Act of 1899, p. 196). It must be certified by an electric inspector "to be a correct meter, and to be of some construction and pattern, and to have been fixed and to have been connected with the service lines in some manner approved of by the Board of Trade" (section 50, p. 196). Any consumer, on payment of the prescribed fee, may have his meter inspected and certified by an electric inspector (section 51, p. 197). The undertakers are required to supply the meters and fix them, and connect the service lines therewith, and procure the meter to be duly certified. The undertakers may require to be paid a price for the meter or require security, or require an agreement

---

\* See footnote, p. 27.

to pay for the hire of the meter (section 52, p. 197). No consumer may connect or disconnect any meter without notice under penalty (section 53, p. 197). Where the meter belongs to the consumer, he must keep it in repair; and when it is hired from the undertakers, they must keep it in repair (section 54, p. 197). The undertakers may let meters for hire, and must (unless the agreement for hire otherwise provides) keep such meters in repair (sections 55 and 56, p. 198). Differences as to the correctness of the meter are settled by the electric inspector. Subject to that provision, the register of the meter is conclusive evidence, in the absence of fraud, of the value of the supply (section 57, p. 198). The undertakers must pay the expenses of providing new meters where they alter the method of charging for energy supplied. They may also, in addition to the consumer's meter, place on his premises a meter or other apparatus of their own for ascertaining or regulating either the amount of energy supplied to the consumer, or the number of hours during which the supply is given, or the maximum power taken by the consumer, or any other quantity or time connected with the supply (sections 59 and 60, pp. 199, 200).\*

Meters—  
*contd.*When conclu-  
sive evidence.

In the Gateshead Electric Lighting Provisional Order, 1899, the question arose whether certain conditions imposed by the corporation should be inserted in the provisional order. The corporation desired to have the question of "free wiring" and penny-in-the-slot meters settled and introduced into the provisional order. The Hon. T. H. W. PELHAM, of the Board of Trade, attended before the Committee of the House of Commons (to whom the confirming Bill stood referred), and stated that the Board had no experience as to whether the coin-fed meter system of electrical supply would succeed, or whether it was desirable that the "free wiring" system should be permitted, and, therefore, the Board of Trade were unwilling to put these provisions in the provisional orders, as by including them in such orders, they would become stereotyped and this would be objectionable. The Committee of the House of Commons ultimately decided that the conditions stipulated for by the corporation should be included in the order (*Electrician*, June 30th, 1899, p. 949). Since that time "free wiring" (in which phrase are included arrangements for payment

Coin meters,  
"free wiring"  
and fittings.

\* See footnote, p. 27.

"Free wiring"  
and fittings  
—*contd.*

by way of rent or by instalments spread over a number of years, purchase on the hire system, etc.) has become very common, and is to be met with where electric energy for lighting purposes is afforded by local authorities as well as by companies. In the case of companies the memorandum of association generally covers the power to make contracts relative to this subject, and in the case of local authorities powers are conferred upon them by Act in very many cases to let for hire, etc., electric lines and fittings. In some cases the services of an independent wiring company come into play. By section 55 of the Schedule to the Act of 1899, undertakers are authorised to let for hire meters "and any fittings thereto." See further the notes to section 25, at p. 122.

Theft of coins  
from meter.

In the case of coins being stolen from a prepayment meter without any negligence on the part of the consumer, the undertakers must bear the loss (*Edmundson v. Longton Corporation* (1902), 19 T. L. R. 15).

Cutting off or  
discontinuing  
a supply of  
energy.

The supply may be cut off or discontinued in the following events:—(1) upon failure to pay the charge for electricity or other sum due to the undertakers in respect of a supply of electricity (Act of 1882, section 21, p. 120); (2) upon failure to give security after seven days' notice (section 27 (3) of Schedule to Electric Lighting (Clauses) Act, 1899, p. 186); (3) if the consumer "uses any form of lamp or burner or uses the energy supplied to him by the undertakers for any purposes or deals with it in any manner so as to unduly or improperly interfere with the efficient supply of energy to any other body or person by the undertakers." See section 27 (4) of above-mentioned Schedule, p. 186. The last of these carries into effect the proviso contained in section 18 of the Act of 1882 (p. 115). As to Power Acts, see the chapter on that subject, *post*.

Undertakers  
not to  
prescribe  
special form  
of lamp or  
burner.

Section 18 of the Act of 1882 provides that the undertakers shall not be entitled to prescribe any special form of lamp or burner to be used by any company or person, or in any way to control or interfere with the manner in which electricity supplied by them is used. This is subject to the proviso above referred to. See p. 115.

Overhead  
wires.

The Act of 1882, section 14, provides that the undertakers shall not be authorised to place any electric line above ground,

along, over, or across any street without the express consent of the local authority. The same section authorises the local authority to require undertakers to remove any electric line placed by them contrary to the provisions of the section, and further authorises the local authority to themselves remove the same in a summary manner, and to recover the expenses. Furthermore, a court of summary jurisdiction is authorised upon complaint made, and notwithstanding any consent on the part of the local authority, to order the removal of any such electric line if they are of opinion that the same "is or is likely to become dangerous to the public safety." See p. 109. In addition to the foregoing enactments, it is provided by section 10 (b) of the Schedule to the Electric Lighting (Clauses) Act, 1899, that "the undertakers shall not, without the express consent of the Board of Trade, and, where the local authority are not themselves the undertakers, of the local authority also, place any electric line above ground except within premises in the sole occupation or control of the undertakers, and except so much of any service line as is necessarily so placed for the purpose of supply." See further, the notes to section 14 of the Act of 1882, pp. 111—112, and section 10 of the Schedule to the Act of 1899 at p. 163. See pp. 247 *et seq.*, and pp. 265 *et seq.*, for Board of Trade Regulations regarding aerial lines. In connection with this subject Lord Cross's Committee (see further at p. 58) reported, "The Committee are of opinion that while it may be advisable to maintain the veto of local authorities as to the erection of overhead wires given by section 14 of the Act of 1882 in respect of other electric wires, it is not advisable that in the case of overhead wires for traction purposes, the local authority other than the London County Council and county boroughs should have an absolute veto. While due weight should be given by the Board of Trade to the representations of local authorities, the Committee think that in the case of wires for purposes of traction it would be sufficient to give a *locus standi* to such local authorities." In some cases municipal authorities have obtained power in special Acts to cut down unauthorised wires. See *post*, p. 112.

Overhead  
wires—*contd.*

By the London Overhead Wires Act, 1891 (54 & 55 Vict. c. lxxvii.), the London County Council are authorised (section 5) to

London Over-  
head Wires  
Act, 1891.

London Over-  
head Wires  
Act, 1891—  
*contd.*

make byelaws, and from time to time vary the same with respect to any of the following matters :—

The identification of overhead wires by registration or otherwise.

The regulation of wires.

The strength of the materials to be employed in placing, maintaining and supporting wires ; and

The removal of wires erected or placed otherwise than in accordance with such byelaws and of disused wires.

These byelaws are subject to the approval of the Board of Trade. They are enforced by penalties. New overhead wires may not be placed except in accordance with the byelaws (section 3). These byelaws are to be enforced and administered by the "Local Authority." As regards the City of London, the Commissioners of Sewers are defined to be the "Local Authority." By an Act of 1897 (60 & 61 Vict. c. cxxxiii.), the Commissioners of Sewers were merged into the Corporation of the City of London.

By section 16 a company shall not be required to place "any wire in any manner which shall be inconsistent with any regulation or condition for securing the safety of the public or for the protection of the electric lines and works of the Postmaster-General made prescribed or imposed by the Board of Trade under the Electric Lighting Acts 1882 and 1888 or under any special Act or provisional order or licence under the provisions of the Electric Lighting Acts 1882 and 1888 or either of them." Section 17 provides that "Nothing in this Act or any byelaw made in pursuance thereof shall apply or extend to any undertakers acting under special Act provisional order or licence under the Electric Lighting Acts 1882 and 1888 or to any wires of such undertakers." The Act does not extend to any wire placed by any person for his private use over land belonging to him or in his possession, which does not extend over any street, and is so constructed and placed that neither the wire nor any support thereof or attachment thereto would be liable to fall into any public street (section 18). Section 19 provides that "Nothing in this Act contained shall be deemed to authorise the Council to confer any powers of placing wires for electric lighting purposes

overhead on any company body or person not authorised so to place such wires by a special Act provisional order or licence under the provisions of the Electric Lighting Acts 1882 and 1888." Byelaws dated July 29th, 1892, were duly made with the approval of the Board of Trade. Under the London Government Act, 1899, borough councils are authorised to enforce these byelaws. See further the Chapter on COUNTRY OF LONDON.

London Over-  
head Wires  
Act, 1891—  
*contd.*

A local authority having obtained a licence, order, or special Act for the supply of electricity may contract with any company or person for the execution and maintenance of any works needed for the purposes of such supply or for the supply of electricity. Section 11 of the Act of 1882, p. 105.

Local  
authority on  
obtaining  
provisional  
order may  
contract.

When the undertakers are a local authority very special provision is always made by the order for the application of their revenue from the undertaking. Shortly stated, the revenue is to be applied (a) in payment of working and establishment expenses, and cost of maintenance of the undertaking, "including all costs, expenses, penalties and damages incurred or payable by the undertakers consequent on any proceedings by or against the undertakers, their officers or servants in relation to the undertaking," (b) in payment of interest or dividend on borrowed money, (c) in providing a sinking fund, (d) in providing all other their expenses of executing the special order not being expenses properly chargeable to capital, and (e) in providing a reserve fund (if they think fit) equal to one-tenth of the aggregate expenditure on the undertaking. The net surplus is to be carried to the credit of the local rate, or at the option of the local authority it may be applied "to the improvement of the district." If the surplus in any year exceeds five per cent. upon the aggregate capital expenditure, the undertakers must make such a rateable reduction in the charge for the supply of energy as in their judgment will reduce the surplus to that maximum rate of profit. Any deficiency of income in any year, not answered out of the reserved fund, is to be charged upon and payable out of the local rate. See section 7 of the Schedule to the Electric Lighting (Clauses) Act, 1899, p. 161.

Application  
of revenue  
of local  
authority.

Transfer of undertaking from company to local authority.

By the Act of 1882, section 27, it was provided that where undertakers were authorised by provisional order or special Act to supply electricity within any area, the local authority of the district might, after the expiration of a period of twenty-one years, or after every subsequent period of seven years, purchase compulsorily the undertaking upon the terms "of paying the then value of all lands, buildings, works, materials and plant, suitable to and used by them for the purposes of their undertaking," nothing being allowed for compulsory purchase or goodwill; such value to be determined, in case of difference, by arbitration. (See further, p. 129.) It was soon found that these terms offered no inducement to the enterprise of electric lighting. Accordingly, by section 2 of the Electric Lighting Act, 1888, the section above referred to was repealed and a new section for effectuating purchase was substituted, in which the period of twenty-one years was changed to forty-two years, and the recurring period from seven to ten years, with other variation, as to which see pp. 145—146. The Act of 1888 provides that upon such purchase all lands, buildings, works, materials, and plant of the undertakers shall vest in the local authority freed from any debts, mortgages, or similar obligations of the undertakers, and that the powers of the undertakers shall absolutely cease and determine, and shall vest in the local authority (p. 145). On the subject of purchase of an undertaking by a local authority, see report of Lord Cross's Committee, *post*, p. 59.

Variation from the forty-two years of the Act of 1888.

Section 3 of the Act of 1888 provides that, notwithstanding anything in section 2 contained, the Board of Trade may by the provisional order, if they think fit, vary the terms upon which any local authority may require the undertakers to sell. For example, during the year 1902 the West Riding Electric Lighting Provisional Order provides for seven years, the Cowes Electric Lighting Provisional Order provides for fourteen years, and every subsequent period of seven years, the Morpeth Electric Lighting Provisional Order twelve years. The above orders were confirmed by 2 Edw. 7, ch. ccvi. The Enfield Electric Lighting Provisional Order, confirmed by 2 Edw. 7, ch. xci., provides for sixteen, twenty-one, or twenty-eight years. The Stanley (Durham) Electric Lighting Provisional Order, confirmed



by 2 Edw. 7, ch. lxi., provides for ten years. The Newburn Electric Lighting Provisional Order, and the Seghill, etc., Electric Lighting Provisional Order, both confirmed by 2 Edw. 7, ch. clxxxvii., provide, the former for thirty-five and the latter for twelve years. Two Scottish Orders (Carnoustie and St. Andrews) of the same year, confirmed by 2 Edw. 7, ch. clxxxvi., provide for purchase after periods of ten, seventeen, twenty-four, and thirty-one years. As regards the County of London, see the note to section 3 of the Act of 1888, *post*, p. 147.

In the case of the County of London, Provisional Orders in favour of companies granted since the passing of the Act of 1888 provide that the before-mentioned period of forty-two years shall run not from the commencement of the order, but from August 26th, 1889; and in many instances seven years have been substituted for ten years as the recurring period thereafter. See p. 147, and report of Lord Cross's Committee, p. 60. See Chapter on COUNTY OF LONDON, *post*, p. 304. In many County of London orders special terms arranged between the parties have been given effect to as to number of years' purchase.

Exceptional provision in case of County of London.

Section 11 of the Act of 1882, after giving power to local authorities who have obtained a provisional order to enter into contracts for works or for the supply of electricity, goes on to provide, "but no local authority, company or person shall by any contract or assignment transfer to any other company or person or divest themselves of any legal powers given to them, or any legal liabilities imposed on them by this Act, or by any licence, order, or special Act, without the consent of the Board of Trade." It was formerly the practice of the Board of Trade to insert in provisional orders in favour of local authorities a clause authorising the local authority to transfer their powers to a company or person with the approval of the Board of Trade. This practice has now been discontinued, unless where good cause can be shown. See pp. 105—106, *n*.

Transfer of undertaking from local authority to company.

By the Act of 1882, section 6, the limitation of the prices to be charged in respect of the supply of electricity, is directed to be dealt with in any order, licence or special Act. Hitherto provisional orders have provided, and now section 31 of the

Price for supply.

Price—*contd.* Schedule to the Electric Lighting (Clauses) Act, 1899, provides that the undertakers may charge for energy supplied by them to any ordinary consumer (otherwise than by agreement)—

- (1.) By the actual amount of energy so supplied ; or
- (2.) By the electrical quantity contained in such supply ; or
- (3.) By such other method as may for the time being be approved by the Board of Trade.

Method being thus provided for, the maximum prices chargeable are still left to be provided for by the special order. Under the first method the usual practice of the Board of Trade is to authorise a charge per quarter of 18s. 4d., for any quantity up to twenty units, and 8d. for every unit over twenty units. In some of the more recent orders these figures have been reduced to 11s. 8d. and 7d. Under the second method, the undertakers are usually authorised to charge according to the above rates, "the amount of energy supplied to the consumer being taken to be the product of such electrical quantity, and the declared pressure at the consumer's terminals, that is to say, such a constant pressure at those terminals as may be declared by the undertakers under the Board of Trade Regulations." These provisions as to price are usually to be found in section 2 of the fourth schedule to the special order. While 8d. or 7d. is the usual Board of Trade maximum price per Board of Trade unit, a lower price is sometimes inserted with the consent of the undertakers, *e.g.*, in the Charing Cross and Strand Order of Session 1899.\* In cases where the local authority are not themselves the undertakers, provision (see p. 189) is made that if the local authority or the undertakers at any time after the expiration of seven years from the commencement of the special order make a representation to the Board of Trade that the prices or methods of charge ought to be altered, the Board of Trade may, after inquiry, make an order varying such prices or methods of charge, or substituting other prices or methods

Varying  
prices or  
methods of  
charge.

---

\* The charge for general supply under this Order is 5d. up to a point, and afterwards 4d. Sixpence per unit is not infrequently the maximum authorised charge after the consumption of a certain number of units. See, *e.g.*, the following Orders of 1902: Newburn, confirmed by 2 Edw. 7, ch. clxxxvii.; Bedlingtonshire and Tadcaster, respectively confirmed by 2 Edw. 7, ch. ccvi.; and Woolwich, confirmed by 2 Edw. 7, ch. ccvii.

of charge in lieu thereof. The prices and methods of charge for the time being in force, may be altered in like manner at any time after the expiration of any or every period of seven years after the same were last altered. See section 32 (2) of the Schedule to the Electric Lighting (Clauses) Act, 1899, p. 189. As to Power Acts, see the chapter on that subject, *post*.

Amongst the sections of the Gasworks Clauses Act, 1871, incorporated with the Act of 1882 (see section 12), is section 41, which provides that whenever any person neglects to pay any rent or sum due and payable by him to the undertakers, the undertakers may recover the same, with full costs of suit, in any court of competent jurisdiction, and that the remedy of the undertakers under that enactment should be in addition to their other remedies for the recovery of such rent or sum. See p. 229. A further remedy is given by the Act of 1882, section 21, which provides that if any local authority, company, or person neglect to pay any charge for electricity or any other sum due from them to the undertakers in respect of a supply of electricity, the undertakers may cut off such supply, and for that purpose cut off or disconnect any electric line or other work through which electricity may be supplied, and may, until such charge or other sum, together with the expenses of cutting off, are fully paid, but no longer, discontinue the supply of electricity to such local authority, company, or person. See p. 120. Section 40 of the Act of 1871, also incorporated, provides that if any person supplied with gas or with meter or fittings, neglects to pay the gas rent or any money due for the hire or fixing of such meter or any expenses lawfully incurred by the undertakers in cutting off the supply of gas, the undertakers may recover the "sum so due in like manner as a penalty." As to the words quoted, see section 12 of the Act of 1882, which provides that sums recoverable under the provisions of section 40 "shall not be recovered as penalties, but may be recovered summarily as civil debts." See pp. 107 and 229. It is provided by section 12, that in the construction of the incorporated Gas Acts, "gas" shall be construed as meaning "electricity." See p. 107.

Recovery of  
price for  
supply.

By action.

By cutting  
off supply.

The Electric Lighting Acts do not contain any provision restricting the profits of companies or individuals under provisional orders

Profits.

to any percentage, and it is not the practice to insert in provisional orders any clauses to that effect. The control over the undertakers in the interests of consumers is effected by the provision for ensuring a revision by the Board of Trade every seven years of the prices and methods of charge, and this on the application of either the local authority or the undertakers. See p. 36. As to Power Acts, see the chapter on that subject, *post*.

Protection of  
canals, etc.

If at any time after the undertakers have placed any works under, in, upon, over, along, or across any canal, any person having power to construct docks, basins, or other works upon any land adjoining to or near such canal, constructs any dock, basin, or work on such land, but is prevented by the works of the undertakers from forming a communication for the convenient passage of vessels, with or without masts, between such dock, basin, or work and such canal; or if the business of such dock, basin, or work is interfered with by reason or in consequence of any such works of the undertakers, then the removal or alteration of the undertakers' works may be obtained subject to the conditions of section 16 of the Act of 1882, including arbitration if need be. See also section 15 of the Schedule to the Electric Lighting (Clauses) Act, 1899, p. 170.

Compensation for  
damage.

In the exercise of their powers the undertakers must cause "as little detriment and inconvenience and do as little damage as may be" and make full compensation to all bodies and persons interested for all damage sustained by them by reason or in consequence of the exercise of such powers, the amount and application of such compensation being determined, in case of difference, by arbitration. See p. 114.

Stealing  
electricity.

Any person who maliciously or fraudulently abstracts, causes to be wasted or diverted, consumes or uses any electricity, shall be guilty of simple larceny and punishable accordingly. See p. 121.

Power to  
enter  
premises.

Any officer appointed by the undertakers may at all reasonable times enter premises supplied in order to inspect the electric lines, meters, accumulators, fittings and works for the supply of electricity belonging to the undertakers and for the purpose of ascertaining the quantity of electricity consumed or supplied, or where a supply of electricity is no longer required, or where

the undertakers are authorised to take away and cut off the supply of electricity from any premises for the purpose of removing any electric lines, accumulators, fittings, works, or apparatus belonging to the undertakers, repairing all damage caused by such entry, inspection or removal. (Act of 1882, section 24, p. 121.)

Any electric lines, meters, accumulators, fittings, works, or apparatus belonging to the undertakers and placed on the consumer's premises "shall not be subject to distress or to the landlord's remedy for rent of the premises where they may be, nor to be taken in execution under any process of a court of law or equity or any proceedings in bankruptcy against the person in whose possession the same may be." (Act of 1882, section 25, p. 122.)

Electric lines, fittings, meters, etc., of undertakers not subject to distress.

Careful provisions are contained in the Act of 1882 for the protection of the Postmaster-General, and to ensure that no telegraphic line of the Postmaster-General shall be injuriously affected. (Act of 1882, sections 26 and 35, pp. 123 and 134.) See further, sections 20 and 79 of the Schedule to the Electric Lighting (Clauses) Act, 1899. By the former of these sections special provisions are inserted in provisional orders for the protection of wires or lines from time to time used for the purpose of telegraphic, telephonic, or electric signalling communication, with appeal to arbitration in case of differences. See further, the Chapter on LEAKAGE AND ELECTROLYSIS, *post*, p. 339.

Provisions for protection of Postmaster-General.

Protection of telegraphic and telephonic wires.

Section 28 of the Act of 1882 provides that where any matter is by that Act or any licence, order, or special Act, directed to be determined by arbitration, such matter shall, except as otherwise expressly provided, be determined by an engineer or other fit person to be nominated as arbitrator by the Board of Trade on the application of either party, and the expenses of the arbitration shall be borne and paid as the arbitrator directs. See p. 130.

Arbitration under the Lighting Acts.

The policy of the Act of 1882 to settle by arbitration difficulties arising between the undertakers and the consumers, and also between the undertakers and public authorities, is carried out by various enactments throughout the Electric Lighting Acts and the licences or provisional orders granted under them, and

Arbitration— now by the Schedule to the Electric Lighting (Clauses) Act,  
*contd.* 1899. The following is a summary of these provisions :—

- (1.) The undertakers are authorised, subject to certain conditions, to alter the position of any pipes or wires being under any street or place, authorised to be broken up by them, which may interfere with the exercise of their powers, on making or securing compensation to the owners. The mode of making such alterations, if not agreed, is to be settled by arbitration (Act of 1882, section 15, p. 114).
- (2.) If at any time after the undertakers have placed any works under, in, upon, over, along, or across any canal, any person having power to construct docks, basins, or other works upon any land adjoining to or near such canal, constructs any dock, basin or work on such land, but is prevented by the works of the undertakers from forming a communication for the convenient passage of vessels with or without masts between such dock, etc., and such canal; or if the business of such dock is interfered with by reason of the works of the undertakers, then the undertakers, at the request of any such person and under the conditions provided, must remove the difficulty. In case of dispute on the subject, the same must be determined by arbitration (Act of 1882, section 16, p. 115).
- (3.) In the exercise of their powers the undertakers must cause as little detriment and inconvenience, and do as little damage as may be, and must make full compensation for all damage sustained. The amount and application of such compensation in case of difference is to be determined by arbitration (Act of 1882, section 17, p. 115).
- (4.) The Act of 1882 was careful to provide that no special form of lamp or burner should be prescribed by the undertakers, and that the undertakers should not in any way control or interfere with the manner in which electricity supplied by them is used by the consumer. In doing so they safeguarded the undertakers by providing that the consumer should not be at liberty

to use any form of lamp or burner, or use or deal with the electricity supplied in any manner so as to unduly or improperly interfere with a supply of electricity to other consumers. Any difficulty between the undertakers and consumers in relation to this matter is to be settled by arbitration (Act of 1882, section 18, p. 116). Arbitration—  
*contd.*

- (5.) No alteration in any telegraphic line of the Postmaster-General can be made by the undertakers, except subject to the provisions of the Telegraph Act, 1878. The undertakers must not lay any line, or do any work, whereby any telegraphic line of the Postmaster-General may be injuriously affected. Before any line is laid or any work is done within ten yards of such telegraphic line, written notice must be given. Any difference between the Postmaster-General and the undertakers must be determined by arbitration (Act of 1882, section 26, p. 123).
- (6.) Special provisions are made with reference to the exercise of the powers of the undertakers in connection with streets not repairable by the local authority or county council or in connection with any railway, tramway, or canal. The undertakers must give one month's notice, and the owners may serve a requisition on the undertakers requiring any question in relation to the works or to compensation in respect thereof, etc., to be settled by arbitration. See section 15 of the Schedule to the Electric Lighting (Clauses) Act, 1899, p. 170.
- (7.) The undertakers may alter the position of pipes (not being part of any sewer) or any wires under streets which may interfere with the exercise of their powers. The undertakers must give one month's notice together with a plan. The owner may serve a requisition requiring arbitration. See section 17 of the above-mentioned Schedule, p. 175.
- (8.) Where the undertakers require to dig any trench for laying lines (other than service lines) or other works near to any sewer, drain, watercourse, defence, or work of the local authority, or any main, pipe, line, or other work belonging to any gas, electric supply, or water

Arbitration—  
*contd.*

company, notice must be given and the work must be done under superintendence. And so where any gas or water company require to dig any trench, to lay mains or pipes (other than service pipes) or other works near any line or works of the undertakers. Any difference arising must be determined by arbitration. See section 18 of above-mentioned Schedule, p. 178.

- (9.) The undertakers must take all reasonable precautions in constructing and working their lines, etc., so as not injuriously to affect, whether by induction or otherwise, the working of any wires or lines used for telegraphic, telephonic, or electric signalling communication or the currents in such wires or lines. Any question arising is to be determined by arbitration. See section 20 (1) of above-mentioned Schedule, p. 180.
- (10.) Furthermore, for the protection of such telegraphic and telephonic wires, a special notice is required to be given by the undertakers, specifying the course, nature and gauge of the intended electric line, and the manner in which it is intended to be used, and the amount and nature of the currents intended to be transmitted thereby, and the extent to and manner in which (if at all) earth returns are proposed to be used. The owners may thereupon serve a requisition requiring specified precautions to be adopted. Any difference with respect to the reasonableness of any requirement so made must be determined by arbitration. See section 20 (2) of above-mentioned Schedule, p. 180.
- (11.) In the metropolis when electric lines are laid in subways, it is usually provided that any difference as to the rent to be paid for the use thereof must be settled by arbitration. See *post*, p. 303.
- (12.) With regard to distributing mains, the policy of a provisional order is to specify in the schedule a list of streets throughout which the undertakers must, within two years, lay distributing mains for a general supply. Over and above this they are required to lay distributing mains for a general supply throughout every other street



or part of a street within the area of supply upon requisition made in manner provided by sections 24—26 of the Schedule to the Electric Lighting (Clauses) Act, 1899, pp. 183—185. Upon the requisition being made, the undertakers may require a guarantee. Any difference as to the amount must be settled by arbitration. See section 25 (2), p. 183. Arbitration—*contd.*

- (13.) Further, in regard to the above-mentioned requisition, it is provided that if the undertakers consider the same to be unreasonable, or that the provisions of the section relating thereto ought to be varied, they may appeal to the Board of Trade, who may authorise the undertakers by notice to require a supply to be taken for such longer period than three years, and to specify such sum or percentage as may be fixed by the Board of Trade. Any difference in regard to such notice, etc., must be determined by arbitration. See section 25 (5), p. 184.
- (14.) Provisional orders define certain conditions under which owners and occupiers may demand, and undertakers are bound to afford, a supply of energy within the defined area of supply. In connection with this, any difference arising as to any improper use of energy or to any alleged defect in any electric lines, fittings, or apparatus must be determined by arbitration. See section 27 (6), p. 186.
- (15.) The consumer is entitled to fix the maximum power which he requires to be supplied, not exceeding what may be reasonably anticipated as the maximum consumption on his premises. Any difference as to what may be so reasonably anticipated must be determined by arbitration. See section 28 (2), p. 187.
- (16.) The price for a supply to public lamps, and the mode in which those charges are to be ascertained, must, in case of difference, be determined by arbitration. See section 34, p. 190.
- (17.) Undertakers (not being a local authority) are required to establish testing stations. Any dispute between a company and a local authority as to whether the number of testing stations and the distance from the

Arbitration—  
*contd.*

main at which they are established is reasonable or excessive, or as to any excessive or improper use of energy for such testing, or as to the performance by the undertakers of their duties under the section requiring them to establish such testing stations, must be determined by arbitration. See section 41 (2), p. 193.

- (18.) It used to be the practice of the Board of Trade to insert in provisional orders in favour of companies, a provision that in the event of the order being revoked, the local authority may require the undertakers to sell the undertaking (or such part thereof as lies within the district of the local authority) upon terms of paying "the then value of all land, buildings, works, materials and plant of the undertakers suitable to and used by them for the purposes of the undertaking, or such part thereof as aforesaid," the value, failing agreement, being determined by arbitration. The clause in question does not occur in the Schedule to the Electric Lighting (Clauses) Act, 1899.
- (19.) Where the local authority are the undertakers, and the Board of Trade revoke the special order as to the whole or any part of the area of supply, any persons liable to repair any street, etc., within such area or part thereof in which any works of the undertakers have been placed, may forthwith remove those works, and the undertakers shall pay the reasonable costs determinable by arbitration. See section 68 (1), p. 204.
- (20.) The Act of 1888, section 2, prescribes the terms upon which, after the expiration of a period of forty-two years from the commencement of the order, or after the expiration of every subsequent period of ten years, the local authority may purchase the undertaking of a company. The value, in case of difference, must be settled by arbitration. See p. 145.

Board of  
Trade Arbitra-  
tions, etc.,  
Act, 1874.

By section 28 of the Act of 1882, a provisional order is to be deemed to be a special Act within the meaning of the Board of Trade Arbitrations, etc., Act, 1874. This Act governs the proceedings where, in pursuance of any special Act, the Board of

Trade are to be arbitrators, or are to appoint any arbitrator. See p. 130. Revocation of Orders.

Provisional orders and licences may be revoked by the Board of Trade in the following events :— Revocation of provisional order under the Lighting Acts.

- (1.) If the undertakers purchase or acquire the undertaking of or associate themselves with any other company or person supplying energy under licence, order, or special Act, unless the undertakers are authorised by Parliament to do so. See section 3 (2) of Schedule, p. 157.
- (2.) If the undertakers supply energy, or erect or lay down any electric lines or works, beyond the area of supply otherwise than under the authority of Parliament or a licence by the Board of Trade. See section 4 (8) of Schedule, p. 158.
- (3.) If the undertakers fail, within a period of six months after the commencement of the order and before exercising any of the powers thereof, to show to the satisfaction of the Board of Trade that they are in a position fully and efficiently to discharge the duties and obligations imposed upon them throughout the area of supply, or fail to make the required deposit or give the required security provided for by the provisional order. See section 5 (3) of Schedule, p. 159.
- (4.) If undertakers fail to lay down distributing mains in accordance with the provisions of the order, and within the periods prescribed in that behalf. See section 23 (3) of Schedule, p. 182.
- (5.) If the undertakers are insolvent. See section 63 of Schedule, p. 201.
- (6.) If the undertaking cannot be carried on with profit. See section 64 of Schedule, p. 201.
- (7.) Where local authority are undertakers and works are not executed. See section 65 of Schedule, p. 202.
- (8.) By consent. See section 66 of Schedule, p. 202.
- (9.) If the undertakers fail to comply with any order of the Board of Trade under the powers of a section which

enables them to make an order requiring the undertakers to abate or discontinue supplying energy otherwise than by means of a system approved by them, or maintaining works above ground, etc., etc. See section 69 (8) of Schedule, p. 205.

Penalties  
under  
the Lighting  
Acts.

Besides the power given to the Board of Trade to revoke provisional orders in the various events before set forth, ample provisions are made for the enforcement of the duties of the undertakers by means of penalties. The Electric Lighting Act, 1882, section 3 (8), and section 4, provides that licences and orders may make such regulations as to the limits within which and the conditions under which a supply of electricity is to be compulsory or permissive, and for enforcing the performance by the grantees of their duties in relation to such supply, and for the revocation of the licence or order where the grantees fail to perform such duties, and generally make and maintain such regulations and conditions as the Board of Trade may think expedient. The Schedule to the Electric Lighting (Clauses) Act, 1899, with its appendix of incorporated sections, contains provisions for penalty in the following events :—

- (1.) Removing or displacing upper surface or covering of street boxes during hours other than those prescribed by local authority. See section 13 (4) of Schedule, p. 166.
- (2.) Default in complying with any of the requirements or restrictions of the section requiring notice of works (including the construction of boxes) in, under, along, or across any street or public bridge, with plan, to be served upon the Postmaster-General. See section 14 (1) (f) of Schedule, p. 169.
- (8.) Default in complying with any of the requirements or restrictions of the section relating to the execution of works in, under, along, or across any street not repairable by the local authority or county council, or over or under any railway, tramway, or canal. See section 15 (h) of Schedule, p. 171.
- (4.) Exercise or discharge by undertakers of their powers or duties otherwise than in accordance with the section providing that the street authority, etc., may give

notice of desire to break up streets, etc., on behalf of undertakers. See section 16 (f) of Schedule, p. 178. Penalties—  
contd.

- (5.) Default in complying with any of the requirements or restrictions of the section authorising the undertakers to alter the position of pipes, wires, etc. (under streets), which may interfere with the exercise of their powers. See section 17 (k) of Schedule, p. 176.
- (6.) Default in complying with any of the requirements or restrictions of the section providing for the laying of electric lines, etc. (other than service lines), near gas or water pipes or other electric lines. See section 18 (5) of Schedule, p. 178.
- (7.) Default in complying with the requirements of the section for the protection of telegraphic and telephonic wires. See section 20 (3) of Schedule, p. 180.
- (8.) Default of undertakers (not being local authority) in laying down any distributing mains in accordance with the provisions of the special order within the periods prescribed in that behalf respectively. See section 23 (1) of Schedule, p. 182.
- (9.) Default in supplying energy to any owner or occupier to whom they may be required under the order to afford a supply. See section 30 (1) of Schedule, p. 187.
- (10.) Default in supplying energy to public lamps. See section 30 (2) of Schedule, p. 187.
- (11.) Default in supplying energy in accordance with Board of Trade Regulations. See section 30 (3) of Schedule, p. 188.
- (12.) Default in sending to Board of Trade notice of any accident by explosion or fire, or other accident causing, or likely to have caused, loss of life or personal injury. See section 38 (1) of Schedule, p. 192.
- (13.) Failure to afford all facilities with respect to inspection and testing and the reading and inspection of instruments. See section 46 of Schedule, p. 195.
- (14.) Connecting or disconnecting meters without notice. See section 53 of Schedule, p. 197.
- (15.) Failure to comply with requirements of section requiring

Penalties—  
*contd.*

- map of area of supply to be made and kept corrected. See section 60 (4) of Schedule, p. 200.
- (16.) Failure to abate or discontinue, on order of the Board of Trade, where undertakers are supplying energy otherwise than by means of a system approved of by the Board of Trade. See section 69 (1) of Schedule, p. 205.
  - (17.) Failure to obey order of Board of Trade forbidding the use of any electric line or work from a particular date until order above referred to is complied with. See section 69 (2) of Schedule, p. 205.
  - (18.) Failure to print and keep for sale copies of Board of Trade Regulations. See section 70 (2) of Schedule, p. 205.
  - (19.) Default in complying with any of the Board of Trade Regulations (A.) for securing the safety of the public. Regulation (A.) 47, p. 253.
  - (20.) Default in complying with the Board of Trade Regulations (B.) for ensuring a proper and sufficient supply of electrical energy. Regulation (B.) 8, p. 256.
  - (21.) Penalty for breaking up streets otherwise than as authorised, or for delay in reinstating, etc. Gasworks Clauses Act, 1847, section 11, p. 226.
  - (22.) Failure to serve notice with respect to work on Postmaster-General or beginning work before expiration of seven days after notice. Telegraph Act, 1878, section 7 (6), p. 126.
  - (23.) Failure to comply with reasonable requirements of Postmaster-General under section 7 of Telegraph Act, 1878, sub-section (7), p. 126.
  - (24.) Destroying or injuring any telegraph line of the Postmaster-General. Telegraph Act, 1878, section 8, p. 127.
  - (25.) Obstructing Postmaster-General in placing, maintaining, altering, or repairing any telegraph line in pursuance of Telegraph Act, 1878, section 9, p. 127.
  - (26.) Failure to comply with requirements of any notice served by Board of Trade or Postmaster-General under section 4 of Act of 1888, on undertakers of works existing otherwise than under licence, order or special Act, p. 148.

The undertakers, within six months from the commencement of the special order, and before exercising any of its powers, must show to the satisfaction of the Board of Trade that they are in a position fully and efficiently to discharge the duties and obligations imposed upon them by the order throughout the area of supply, and they must further deposit or secure to the satisfaction of the Board of Trade a sum of money. Failing compliance with these requirements, the provisional order is liable to revocation. See section 5 of Schedule to Act of 1899, p. 159.

Security for execution of works under the Lighting Acts.

The undertakers shall be answerable for all accidents, damages, and injuries happening through the act or default of the undertakers or of any person in their employment by reason of or in consequence of any of the undertakers' works, and shall save harmless all authorities, bodies and persons by whom any street is repairable and all other authorities, companies and bodies collectively and individually and their officers and servants from all damages and costs in respect of those accidents, damages and injuries. See section 77 of Schedule to Act of 1899, p. 208. See also section 17 of Act of 1882, p. 115, and section 6 of the Gasworks Clauses Act, 1847, p. 212.

Undertakers to be responsible for all damages.

The undertakers are required to send to the Board of Trade notice of any accident by explosion or fire, and also of any other accident of such kind as to have caused or to be likely to have caused loss of life or personal injury, which has occurred in any part of the undertakers' works or their circuits, or in connexion with those works or circuits, and also notice of any loss of life or personal injury occasioned by any such accident. Such notice shall be sent by the earliest practicable post after the accident occurs or as the case may be after the loss of life or personal injury becomes known to the undertakers. If the undertakers fail to comply with this duty they are liable for each offence to a penalty not exceeding twenty pounds. See section 38 (1) of Schedule to Act of 1899, p. 192. See further, as to the Factory and Workshop Act, 1901, *post*, p. 52.

Notice of accidents and injuries to be given by undertakers.

The Board of Trade may also if they deem it necessary appoint any electric inspector or other fit person to inquire and report as to the cause of any accident affecting the safety of the public which may have been occasioned by or in

Inquiry by Board of Trade.

Inquiry by  
Board of  
Trade—*contd.*

connexion with the undertakers' works, whether notice of the accident has or has not been received from the undertakers, or as to the manner and extent in and to which the provisions of the special order and the principal Act, and of the Board of Trade Regulations, so far as those provisions affect the safety of the public, have been complied with by the undertakers, and any person appointed under this section not being an electric inspector shall for the purposes of his appointment have all the powers of an electric inspector under the special order. See section 38 (2) of Schedule, p. 192.

Protection  
of local  
authority  
and their  
officers from  
personal  
liability.

When a local authority are the undertakers section 265 of the Public Health Act, 1875, is incorporated. That section is to the effect that no matter or thing done, and no contract entered into by any local authority, and no matter or thing done by any member of any such authority, or by any officer of such authority, or other person whomsoever acting under the direction of such authority, shall, if the matter or thing were done or the contract were entered into *bonâ fide* for the purpose of executing that Act, subject them or any of them personally to any action, liability, claim, or demand whatsoever. See further at p. 163.

Public  
Authorities  
Protection  
Act, 1893.

Local authorities enjoy the further protection afforded by the Public Authorities Protection Act, 1893 (56 & 57 Vict. c. 61). That Act provides that where after the commencement of the Act any action, prosecution, or other proceeding is commenced in the United Kingdom against any person for any act done in pursuance or execution or intended execution of any Act of Parliament, or of any public duty or authority, or in respect of any alleged neglect or default in the execution of any such act, duty or authority, certain provisions shall have effect. These are:— (1), the action, prosecution, or proceeding must be commenced within six months next after the act, neglect or default complained of, and in case of a continuance of injury or damage, within six months next after the ceasing thereof; (2) judgment for the defendant shall carry costs as between solicitor and client; (3) where the proceeding is an action for damages, tender of amends before action may be pleaded; (4) where no sufficient opportunity of tendering amends before action has been given, the court may award to the defendant costs as between solicitor and



client. These provisions do not affect any proceedings by any department of the Government against any local authority or officer of a local authority. See p. 163. The phrase "public authorities" occurs in the title to the Act, and not in the body of it. Section 1 speaks only of "any person." It has been decided that the intention of the Act is to protect public bodies. *Fielding v. Morley Corporation*, [1899] 1 Ch. 1; affirmed H. L. *sub nom. Fielden v. Morley Corporation*, [1900] A. C. 133. And the Act protects the public authority when acting in pursuance of a trade or business which in private hands would be of a private character. *The Ydun*, [1899] P. 286. A municipal corporation authorised by provisional order confirmed by Parliament to supply electric energy comes within the protection of the Act (*Jeremiah Ambler & Sons, Limited v. Bradford Corporation*, [1902] 2 Ch. 585).

Public  
Authorities  
Protection  
Act, 1893—  
*contd.*

By the Weights and Measures Act, 1889 (52 & 53 Vict. c. 21), it is provided :—

New denomi-  
nations of  
standards for  
measurement  
of electricity.

Section 6. "The Board of Trade shall from time to time cause such new denominations of standards for the measurement of electricity, temperature, pressure, or gravities as appear to them to be required for use for trade to be made and duly verified, and those new denominations of standards when approved by Her Majesty in Council shall, whether derived from imperial or from other standards, be Board of Trade standards, in like manner as if they were mentioned in the Second Schedule to the principal Act" (41 & 42 Vict. c. 49).

In pursuance of the above section a committee was appointed by the Board of Trade to consider and report whether any, and if so, what action should be taken by the Board of Trade under that section. The committee made a report in 1891. (Parliamentary Paper, 1891, C. 6530.) They made a second report after conference with representatives of the German, French, and American Governments respectively. (Parliamentary Paper, 1894, C. 7552.) They recommended the fixing of certain units which were named after eminent electricians. These units were the Ohm, the Ampère, and the Volt. The Volt represents the standard of electrical pressure or electro-motive force. The Ohm represents the standard of electrical resistance, and the Ampère represents the standard of electrical current. See p. 293.

Board of  
Trade  
committee.

Order in  
Council.

Accordingly by an Order in Council dated August 23rd, 1894, these new denominations of standards have been established. See p. 292. In the use of these standards the limits of accuracy attainable are in the case of the Ohm within one-hundredth part of one per cent., in the case of the Ampère within one-tenth part of one per cent., and in the case of the Volt within one-tenth part of one per cent. See p. 292.

Board of  
Trade unit.

What is known as the "Board of Trade unit" is the starting point for estimating the charge for energy supplied. This unit is defined in provisional orders to mean "the energy contained in a current of 1,000 Ampères flowing under an electro-motive force of one Volt during one hour." See p. 234.

Factory and  
Workshop  
Act, 1901.

Works for generating or transforming electricity come within the Factory and Workshop Act, 1901 (1 Edw. 7, c. 22). Section 149 of that Act in conjunction with the Sixth Schedule, subsection 20, classes amongst "Non-Textile Factories," "'Electrical stations,' that is to say any premises or that part of any premises in which electrical energy is generated or transformed for the purpose of supply by way of trade or for the lighting of any street, public place or public building, or of any hotel or of any railway, mine or other industrial undertaking."

Enactment as  
to dangerous  
trades.

By section 79 (which takes the place of an enactment to the same effect in the repealed Act of 1891) it is provided that—

"Where the Secretary of State is satisfied that any manufacture, machinery, plant, process or description of manual labour, used in factories or workshops, is dangerous or injurious to health or dangerous to life or limb, either generally or in the case of women, children or any other class of persons, he may certify that manufacture, machinery, plant, process, or description of manual labour to be dangerous; and thereupon the Secretary of State may, subject to the provisions of this Act, make such regulations as appear to him to be reasonably practicable and to meet the necessity of the case."

Electric Accumulator Works have been certified by the Secretary of State to be dangerous or injurious to health. The following special regulations have been issued for such works :—

## ELECTRIC ACCUMULATOR WORKS.\*

Factory and  
Workshop  
Act, 1901—  
*contd.*

## DUTIES OF OCCUPIERS.

- They shall provide a bath and lavatory accommodation with a plentiful supply of hot and cold water, soap, nail-brushes, and towels.
- They shall provide respirators and overall suits for all persons employed in the operation of mixing.
- They shall provide gloves and aprons for all persons employed in the occupation of rubbing.
- They shall see that the gloves are constantly inspected and renewed when defective.

## DUTIES OF PERSONS EMPLOYED.

In cases where the co-operation of the workers is required for carrying out the foregoing rules, and where such co-operation is not given, the workers shall be held liable in accordance with the Factory and Workshop Act, 1891, section 9.

*Respirators.*—A good respirator is a cambric bag, with or without a thin flexible wire made to fit over the nose.

It appears from the report of the Chief Inspector of Factories and Workshops for the year 1901, Parliamentary Paper, 1902, Cd. 1112, that the Dangerous Trades Committee have submitted certain recommendations as regard electrical works, which will be found at pp. 28—30 of their Report. The following is an extract from the Report (p. 28):—

Recommendations of  
Dangerous  
Trades Com-  
mittee.

“ELECTRICAL STATIONS.—These important works continue, and will continue, to increase in number and size, especially now that it is made clear by the new Act that any place in which electrical energy is generated or transformed (except private houses) is a factory, and as such under the regulations of Factory Acts. The way to supervision has been paved by calling attention of occupiers and managers to the Recommendations of the Dangerous Trades Committee on electrical works, and I annex a report by Mr. Fearon showing how far the recommendations are already generally observed, the difficulties as to others, and making additional recommendations. It is only necessary to add to his report that it is of little use having a card of instructions as to artificial respiration hung up in the works unless the engineers and employés sometimes practice the rules given, so as to know what to do when occasion requires without reference to the card.”

\* The above special regulations were made and issued under section 8 of the Factory and Workshop Act, 1891 (54 & 55 Vict. c. 75). This section, and also section 9 (providing for penalty), are among the sections of the Act of 1891, which are temporarily preserved from repeal, “the object being to preserve the special rules made thereunder, until such time as inquiries can be held and new regulations made under the present Act.” “Redgrave’s Factory Acts,” 9th ed., at p. 246. It appears from the annual report of the Chief Inspector of Factories and Workshops for the year 1901, Parliamentary Paper, Cd. 1300 of 1902, that there were during that year 22 electric accumulator works under special rules (p. 15).

**Report of accidents.**

One effect of putting "electrical stations" as above defined within the Factory and Workshop Act, 1901, is to require notice of accidents causing death or bodily injury within the meaning of section 19 to be given to the inspector for the district, and as to the investigation and report upon such accidents, see sections 20—22. The foregoing provisions are independent of the notice to the Board of accidents and inquiries into the same provided for by section 38 of the Schedule to the Electric Lighting (Clauses) Act, 1899. The latter section covers a wider field than the former. See also the Notice of Accidents Act, 1894 (57 & 58 Vict. c. 28).

**Lime-washing.**

The Secretary of State for the Home Department has given notice pursuant to section 3 (3) of the Rules Publication Act, 1893, that on March 26th, 1902, he made an order under section 1 of the Factory and Workshop Act, 1901, exempting from the provisions of the said section, as to lime-washing, those parts of electric generating works (and certain other specified works) in which the number of cubic feet of space bears to the number of persons employed therein at one time a proportion not less than 2,500 to every person (*London Gazette*, April 1st, 1902).

**Settled Land Acts.**

The Settled Land Act, 1882 (45 & 46 Vict. c. 38), was extended by the Settled Land Act, 1890 (53 & 54 Vict. c. 69), section 13, and the latter Act provided that improvements authorised by the Act of 1882 shall include "making any additions to or alterations in buildings reasonably necessary or proper to enable the same to be let." Leasehold houses in a fashionable quarter of London were vested in trustees of a settlement for the residue of long terms of years of which a considerable time had to run. They were more than fifty years old, and were lighted by an imperfect service of gas. The trustees laid out money in installing the electric light in these houses to meet the requirements of the tenants. Held by JOYCE, J., on originating summons, that such installations, (exclusive of fittings, such as would be ordinarily supplied by a tenant) were "additions" to the houses within the meaning of section 13 of the Settled Land Act, 1890, and might be paid for out of the capital money (*Re Freake, Lord Kinnauld v. Freake*, [1902] 1 Ch. 97). This case, however, was not followed in the later case of *Re Clarke's Settlement*, [1902] 2 Ch. 927. There the tenant for life of a house let it to a tenant who required

certain improvements, and in particular the installation of electric lighting. The tenant for life having had the work done, applied to the Court by originating summons for an order directing the trustees of the settlement to repay to him out of capital moneys in their hands (*inter alia*) the cost of the installation. BUCKLEY, J., refused the application, observing, "It was true that in *In Re Freake's Settlement* the cost of an installation of electric lighting had been allowed out of capital, but he had the authority of JOYCE, J., for stating that the learned judge was only dealing with the particular facts of the case before him, and was not laying down any general rule." It had previously been decided in *In re Gaskell's Settled Estates*, [1894] 1 Ch. 485, by CHITTY, J., that a boiler and hot-water pipes were not "additions" within the meaning of the Settled Land Act, 1890.

Settled Land  
Acts—*contd.*

In March, 1898, a Joint Committee of the House of Lords and House of Commons was appointed to consider and report:—

Joint Com-  
mittee on  
Electrical  
Energy  
(Generating  
Stations and  
Supply), 1898.

- (1.) Whether, notwithstanding the provisions of section 12 (1) of the Electric Lighting Act, 1882, powers should be given in any cases for acquiring land compulsorily for generating stations; and, if so, under what conditions as respects liability for nuisance, notices to surrounding owners, and otherwise;
- (2.) Whether compulsory powers of acquiring land for generating stations, if proper to be given in any case, should be given where the proposed site is not within the area of supply;
- (3.) Whether, in case of a generating station, however acquired, not being situate within the area of supply, power should be given for the breaking up of streets between the generating station and the boundary of the area of supply;
- (4.) Whether powers should be given in any case for the supply of electrical energy over an area including districts of numerous local authorities, involving plant of exceptional dimensions and high voltage; and, if such powers may properly be given, whether any, and what, conditions should be imposed—
  - (a.) With respect to system and plant, and to the

Joint Com-  
mittee of  
1898—*contd.*

construction and location of generating stations, in view of the powers of purchase conferred upon local authorities by sections 2 and 3 of the Electric Lighting Act, 1888.

(b.) With respect to the relations of the promoters to other undertakers and to local authorities within parts of the area ;

(5.) Under what conditions (if any) ought powers to be conferred upon promoters seeking to supply electrical energy to other undertakers and not directly to consumers.

The Committee, which was presided over by Viscount Cross, took evidence and heard counsel representing various electric supply companies and municipal corporations. In their report (Parliamentary Paper, 1898, No. 213) they say ;—

“The Committee have heard all the witnesses tendered by the several parties and have agreed upon the following answers to the several questions referred to them ;—

“Question 1.

Compulsory  
powers for  
land.

“(a) The proved public advantages of electrical energy in the generation of light and power warrant in their opinion the granting to undertakers of compulsory powers for acquiring sites for generating stations and lands or easements for pipes and mains therefrom, and other works.\*

“(b) Provision should be made for the granting of these powers in the Provisional Orders of the Board of Trade, subject to confirmation by Parliament. Such provision would facilitate a continuance of the existing practice, according to which more or less uniform conditions under which undertakers are to work are provisionally settled by the Board of Trade. Procedure by private Bill should be reserved, as at present, for exceptional cases.

“(c) Such powers may be given either to local authorities or to incorporated companies, whether the incorporation be by Special Act or Provisional Order or under the Companies Acts.

---

\* See *post*, pp. 61—70, as to the practice of Parliament in this behalf when the procedure has been by Bill instead of provisional order

“(d) With respect to liability for nuisance, they are of Nuisance. opinion that where the site for a generating station is acquired under compulsory powers, and is specified in the Provisional Order or Special Act, the undertakers should not be subjected to any further liability than that which, according to Lord BLACKBURN (*Geddis v. Bann Reservoir*, 3 App. Cas. 455),\* is imposed by the common law in the case of persons exercising statutory powers and duties. On the other hand, where the site for a generating station is acquired by agreement, they think the undertakers ought to be subject to the liability imposed by the common law.

“(e) With respect to notices, they think that the existing Notices. practice as to notices to the local authorities and also to owners, lessees, and occupiers of lands proposed to be taken should be followed.

“With respect to notices in gazettes and newspapers, they do not suggest any amendment of the existing procedure.

“The amendment of the Electric Lighting Acts, necessary to empower the Board of Trade to grant compulsory powers, will, they assume, comprise provisions for notices and other matters of procedure, for which precedents are found in the Housing of the Working Classes Act, 1890, and in the Light Railways Act, 1896.

---

\* Lord BLACKBURN's opinion is in these words: “It is now thoroughly well established that no action will lie for doing that which the Legislature has authorised, if it be done without negligence, although it does occasion damage to anyone; but an action does lie for doing that which the Legislature has authorised if it be done negligently. And I think that if by a reasonable exercise of the powers either given by statute to the promoters, or which they have at common law, the damage could be prevented, it is, within this rule, negligence not to make such reasonable use of their powers.”

---

The substance of the above decision is thus tersely put by LINDLEY, M.R., in *Southwark and Vauxhall Water Co. v. Wandsworth Board of Works*, [1898] 2 Ch. at p. 608: “The defendants flooded the plaintiffs' land, and said, in effect, that they could not help it. The answer was that they could help it if they kept a stream into which they poured water free from obstruction by mud, which they could do if they chose.” In *Ruttee v. Norwich Electric Tramways Co.* (1902), 18 T. L. R. 562, the Court of Appeal held that although the Company were authorised by Parliament to run their tramways along the public roads and thus to do what otherwise would have been a nuisance it did not free them from the obligation to exercise their statutory powers with care. “There is no pretence for the proposition that, because the company were authorised to run trams on the highway, their drivers were exempted from the common law obligation to take reasonable care not to injure persons lawfully using the highway.” Per VAUGHAN WILLIAMS, L.J.

## “ Question 2.

Where generating station is not within area of supply.

“ Subject to the above observations, the Committee are of opinion that compulsory powers for the acquisition of land for a generating station, and lands or easements for pipes and mains and other works to the area of supply, may also properly be given where the proposed site is not within the area of supply. The local authorities for the district or districts in which the site is, and the owners, lessees, and occupiers, should have the same notices and the same *locus standi* as if that district were the area of supply. Provision also should be made for serving notices to local authorities and owners, etc., of districts or land through whose districts or land mains are to be run from the generating station to the area or areas of supply.

## “ Question 3.

Mains to connect outside generating station with area.

“ In the case of powers being given for the erection of a generating station outside the area of supply, they think that powers may properly be given\* for laying the mains in streets leading from the generating station to the boundaries of the area of supply. In such case the local authority liable to maintain these streets should have the same option of themselves breaking up and reinstating the streets at the undertakers' expense as is now given in the Provisional Orders to local authorities within the area of supply, and should be empowered accordingly.

Overhead wires.

“ The Committee are of opinion that while it may be advisable to maintain the veto of local authorities as to the erection of overhead wires, given by section 14 of the Act of 1882, in respect of other electric wires, it is not advisable that in the case of overhead wires for traction purposes the local authority, other than the London County Council and county boroughs, should have an absolute veto. While due weight should be given by the Board of Trade to the representations of local authorities, the Committee think that in the case of wires for purposes of traction it

---

\* See *post*, pp. 61—70, for the practice of Parliament since the date of this Report, where the procedure has been by Bill, and not by provisional order.



would be sufficient to give a *locus standi* to such local authorities.

“ Questions 4—5.

“ Where sufficient public advantage is shown, powers may be given for the supply of electrical energy over an area including districts of numerous local authorities, and involving plant of exceptional dimensions and high voltage. The Committee further think that undertakings of this character may properly be authorised on conditions differing in some respects from those imposed by and under the existing Acts.

Bulk supply over districts of numerous local authorities.

“ Among the undertakers referred to in the preceding paragraph will be found undertakers supplying energy chiefly in bulk or wholesale to other undertakers, whether local authorities or companies, whose areas of supply are wholly or partly within the area of such bulk or wholesale supplying company, and who distribute the energy so obtained to consumers.

“ As to giving compulsory powers of purchase of undertakings to local authorities, the Committee, without questioning the policy of Parliament in having given such powers, observe :—

Purchase by local authorities.

“ *First.* That when the power of purchase was granted in 1882 and 1888, no such schemes of supplying energy in bulk were contemplated as are now before Parliament.

“ *Secondly.* That when the power of purchase was thus granted the question then before Parliament was chiefly one of light ; whereas the evidence given before the Committee shows that although electric light is at present the predominant feature of the enterprises now before the public and Parliament, the application of electrical energy in the form of power to an infinite variety of other purposes is likely to be in the near future the predominant feature and function of these undertakings.

Electric energy as power.

“ *Thirdly.* It does not appear to them that an undertaking supplying energy in bulk at high voltage and in comparatively few mains is as a rule so desirable for the local authority to acquire as a low voltage undertaking with many distributing mains.

“ The Committee think the provisions of the Electric Lighting Act, 1888, enabling the local authority to purchase an undertaking

Bulk undertakings and high voltages.

Bulk under-  
takings and  
high voltages  
—*contd.*

after a term of years, inapplicable, as a general rule, to the case of an undertaker supplying energy in bulk at high voltage, but there may be special cases where it is desirable that the local authorities should have the right to purchase reserved to them. To meet such cases they suggest that the Board of Trade should have power to insert the purchase clause in the Provisional Order, if the local authorities concerned can, in the opinion of the Board, show good cause for such a course.

“It is to be observed that the exemption from liability to compulsory purchase would not prevent local authorities, either alone or in combination with other local authorities, from applying for powers to purchase, but each case would have to be judged on its merits, and such conditions imposed as might be thought fit.

“In cases of the exemption from liability to purchase, it would be specially expedient in the interest of the consumers that some kind of sliding scale, as in the case of gas undertakings, should be imposed.

Purchase of  
undertakings  
in County of  
London.

“In connection with this question of purchase under section 2 of the Act of 1888, evidence has been given to the effect that with a view to secure in London one and the same time for the execution of the powers, the Board of Trade have in some cases imposed upon undertakers a less term than forty-two years within which they are liable to be purchased.

“The Committee suggest that if the full period of forty-two years is not granted, and if a substantially shorter period is imposed by the Board of Trade, the terms of purchase should in each case be reconsidered.

Consent of  
local  
authority.

“The Committee consider that the provisions of the Electric Lighting Act, 1888, which require the consent of the local authority as a condition precedent to the granting of a Provisional Order, should be amended. In their opinion, the local authority should be entitled to be heard before the Board of Trade, but should not have, so to speak, a provisional veto, only to be dispensed with in special cases by the Board of Trade.

“With respect to conditions, the Committee think it reasonable that where a local authority, or company having power to supply light within a certain area of supply, seeks to obtain compulsorily land for a generating station outside that area, it should not be allowed, except where Parliament or the Board of Trade decide otherwise, to supply from that generating station any area outside the area of supply of such authority or company.

Supply to  
outside areas.

“With regard to the powers of purchase conferred by section 2 of the Act of 1888, they are of opinion that local authorities should be empowered to purchase undertakings partly outside their area of supply on terms agreed upon by the Board of Trade.

Purchase.

#### PROVISIONAL ORDERS.

“The ordinary clause which forbids any connection with the earth, except with the approval of the Board of Trade and the concurrence of the Postmaster-General, should be inserted in every case.

Connection  
with earth.

“As to protection of telegraphs and telephones the clauses now inserted in Provisional Orders seem to be sufficient in all ordinary cases: And regulations to protect the public can be made by the Board of Trade under section 6 of the Act of 1882.

Protection of  
telegraphs  
and tele-  
phones.

“The clauses which protect gas and water pipes have worked satisfactorily, and should be continued, but the Committee would direct attention to the observations of Mr. PREECE as regards the difficulty arising from the working of tramways by trolley wires: His suggestion as to a strong ‘control clause’ should be carefully considered.

Gas and water  
pipes.

“They are disposed to concur generally with Lord MORLEY and Sir C. BOYLE in thinking that as compulsory powers are given solely for the benefit of the public, it would be desirable to make some provision against these companies being subject to foreclosure on mortgage, and against their rolling stock and plant being liable to distress.”

Liability of  
plant to  
distress.

Although no public legislation has been passed since the Report of Lord Cross's Committee to empower the Board of Trade to confer power by provisional order to take land compulsorily,

Compulsory  
powers and  
nuisance.

yet there have been many instances since that Report, where power has been given by Act to take land compulsorily for generating and transforming stations, and lands and easements for pipes and mains and other works. The question of nuisance is generally (though not always) treated in these Acts on the footing recommended by Lord Cross's Committee.

Session of  
1899.

Central Electric Supply Company's Act, 1899 (62 & 63 Vict. ch. lxxxviii.).

Section 13 confers compulsory powers, and the Act is silent as to nuisance. This means that the company are exempt from liability, except to the extent laid down by the House of Lords in the case of *Geddis v. Proprietors of Bann Reservoir*, ante, p. 57.

Kensington and Notting Hill Electric Lighting Companies Act, 1899 (62 & 63 Vict. ch. lxxxiii.).

Sections 5, 15, and 16 confer compulsory powers, and the Act is silent as to nuisance.

Loughborough Corporation Act, 1899 (62 & 63 Vict. ch. cxvii.).

Section 47 confers compulsory powers, and is also silent as to nuisance.

Newcastle-upon-Tyne Tramways and Improvement Act, 1899 (62 & 63 Vict. ch. cclxv.).

Section 28 authorised the Corporation to use certain defined lands for the purposes of a generating station. The Act is silent as to nuisance.

St. James' and Pall Mall Electric Light Company's Act, 1899 (62 & 63 Vict. ch. xciv.).

Section 4 confers compulsory powers, and is silent as to nuisance.

Walker and Wallsend Union Gas Company's (Electric Lighting) Act, 1899 (62 & 63 Vict. ch. ccviii.).

By section 7 the company obtained power to use as a station for generating electricity certain lands "belonging to them." The Act is silent as to nuisance.

Brighton Corporation Act, 1900 (63 & 64 Vict. ch. xcix.).

Session of  
1900.

By section 62 the corporation obtained compulsory powers. By section 53 certain sections of the Schedule to the Electric Lighting (Clauses) Act, 1899, are incorporated, but these do not include section 81, which relates to nuisance.

Charing Cross and Strand Electricity Supply Corporation, Limited (Further Powers) Act, 1900 (63 & 64 Vict. ch. ccxxvii.).

Section 4 conferred compulsory powers, and the Act is silent as to nuisance.

City of London Electric Lighting Act, 1900 (63 & 64 Vict. ch. lxxxviii.).

Section 4 confers compulsory powers, and the Act is silent as to nuisance.

Devonport Corporation Act, 1900 (63 & 64 Vict. ch. cclxiii.).

The preamble states that the corporation were about to erect a generating station "on lands purchased by them for the purpose." Section 34 authorised the construction of the generating station, and contains the following proviso: "Nothing in this section shall exonerate the corporation from any indictment, action or other proceedings for nuisance in the event of any nuisance being caused or permitted by them."

Newcastle-upon-Tyne Electric Supply Company's Act, 1900 (63 & 64 Vict. ch. ccxl.).

Section 6 confers compulsory powers. By section 3 certain provisions of the Schedule to the Electric Lighting (Clauses) Act, 1899, are incorporated, but section 81 is expressly excluded.

West Ham Corporation Act, 1900 (63 & 64 Vict. ch. ccxli.).

Section 60 confers compulsory powers to take land for an extension of an electric generating station. Section 15 authorises the erection of a generating station "subject to the provisions of section 16 of the West Ham Corporation Electric Lighting Order, 1892." This section (16) is "for the protection of telegraphic and telephonic wires," and sub-section (4) thereof is as follows, "Nothing in this section contained shall be held to deprive any owner of any existing rights to proceed

against the undertakers by indictment, action or otherwise in relation to any of the matters aforesaid."

Power Acts  
of 1900.

Power Acts were passed for the first time in the Session of 1900. There were four of such Acts. All of them contain power to take land compulsorily and to erect generating stations. In two of them, Lancashire Electric Power Act, 1900 (63 & 64 Vict. ch. ccxxxv.), and South Wales Electric Power Distribution Company Act, 1900 (63 & 64 Vict. ch. cclxxxii.), section 81 of the Schedule to the Electric Lighting (Clauses) Act, 1899, is amongst the sections which are incorporated. In the other two Acts, County of Durham Electric Power Supply Act, 1900 (63 & 64 Vict. ch. ccxxxi.), and North Metropolitan Electric Power Supply Act, 1900 (63 & 64 Vict. ch. cclxxvi.), section 81 is expressly excluded from incorporation.

Session of  
1901.

Blackburn Corporation Act, 1901 (1 Edw. 7, ch. ccxxiii.).

By section 115 the corporation are authorised to generate electricity on certain lands used for gasworks. The section is qualified by the words "subject to the provisions of the Blackburn Electric Lighting Order, 1890." Section 82 of the Order of 1890 is in the following words: "Nothing in this Order shall exonerate the undertakers from any indictment, action or other proceedings for nuisance in the event of any nuisance being caused by them."

Mansfield Corporation Act, 1901 (1 Edw. 7, ch. xcvi.).

Section 54 contains compulsory powers. Section 46 contains powers to construct a refuse destructor and generating station "subject to the provisions of section 16 of the Mansfield Electric Lighting Order, 1899." This section (16) is similar to section 16 of the West Ham Order of 1892, referred to above.

Metropolitan Electric Supply Company Act, 1901 (1 Edw. 7, ch. ccxxviii.).

This company promoted a Bill, the short history of which is as follows: In the Session of 1898 the company obtained an Act (61 & 62 Vict. ch. ccxxxv.) to enable them to erect a generating station at Willesden, and to lay down a line of

cables between the generating station and their several areas of supply following, for the most part, the towing-path of the Grand Junction Canal. The Act of 1898, by section 2, authorised the company to use as a generating station "certain lands recently acquired by them." The Act is silent as to nuisance. The Act of 1901 recited the Act of 1898, and further that the company had applied to the Board of Trade to consent to an "extra high pressure" supply being given by the company to their distributing stations, and that the Board of Trade had consented thereto, subject to, *inter alia*, a condition that at least two separate and distinct trunk mains should be laid to the distributing stations and, where practicable, by different routes. The object of the Act of 1901 was to authorise the laying of a trunk main along a second and different route. The Act, as passed, is silent as to nuisance.

Notting Hill Electric Lighting Act, 1901 (1 Edw. 7, ch. lxxviii.).

Section 5 confers compulsory power to take land for works for storing, transforming and distributing electrical energy, and is silent as to nuisance.

Portunadoc, Beddgelert, and South Snowdon Railway Act, 1901 (1 Edw. 7, ch. cclxii.).

By section 37 a generating station was authorised upon certain defined land. By section 3 certain sections of the Schedule to the Act of 1899 are incorporated, and section 81 as to nuisance is so incorporated.

Stalybridge, Hyde, Mossley, and Dukinfield Tramways Electricity Board Act, 1901 (1 Edw. 7, ch. cxcv.),

Section 28 contains compulsory powers, and section 30 authorises the construction of a generating station. By section 3 certain sections of the Schedule to the Act of 1899 are incorporated. These include section 81.

West Cumberland Electric Tramways Act, 1901 (1 Edw. 7, ch. ccli.),

Section 79 contains power to take land compulsorily for various purposes, including the erection of generating stations. By section 3 certain sections of the Schedule to the Act of 1899 are incorporated. These include section 81, but there is

E.L. F

added the following : " Section 81 of the said Schedule shall not apply to any generating stations or works erected on any of the lands described in the first Schedule to this Act."

Power Acts  
of 1901.

During the Session of 1901, six Electric Power Acts were passed. Section 81 of the Schedule to the Act of 1899 is incorporated with the four following : Cleveland and Durham County Electric Power Act, 1901 (1 Edw. 7, ch. civ.), Clyde Valley Electrical Power Act, 1901 (1 Edw. 7, ch. ccxxv.), Shannon Water and Electric Power Act, 1901 (1 Edw. 7, ch. cxxxvi.), and the Loch Leven Water Power Act, 1901 (1 Edw. 7, ch. cclxx.). In the case of the two following, section 81 is incorporated, with the qualification that " section 81 of the said Schedule shall not apply to any generating station or works erected on any of the lands described in the first Schedule to this Act ;"—Yorkshire Electric Power Act, 1901 (1 Edw. 7, ch. cxvi.), and Derbyshire and Nottinghamshire Electric Power Act, 1901 (1 Edw. 7, ch. cxxi.). As to the latter Act see further under the Session of 1902.

Session of  
1902.

Birmingham and Midland Tramways Act, 1902 (2 Edw. 7, ch. ccxxiii.).

Section 34 authorises the construction of a generating station on certain defined land. There is no special provision in regard to nuisance.

Cavehill and Whitewell Tramways Act, 1902 (2 Edw. 7, ch. clxxx.).

Section 4 authorises the construction of generating stations on certain described land. There is no provision in regard to nuisance.

Croydon and District Electric Tramways Act, 1902 (2 Edw. 7, ch. clxxi.).

Section 4 contains compulsory powers, and section 11 authorises the construction of station for generating, transforming, etc., electrical power. The Act is silent as to nuisance.

Dartford Improvement Act, 1902 (2 Edw. 7, ch. liv.).

Section 24 gives power to take land compulsorily. Section 34 authorises construction of generating station on lands scheduled, and provides that " Nothing in this Act shall



exonerate the council from any indictment, action or other proceeding for nuisance. . . .”

**Erdington Tramways Act, 1902 (2 Edw. 7, ch. lxiii.).**

Section 9 confers power to use certain defined land for generating station, etc. By section 11 authority is given to purchase additional land by agreement, “but nothing in this Act shall exonerate the council from any indictment, action or other proceeding for nuisance in the event of any nuisance being caused or permitted by them on any land purchased or acquired by agreement under the powers of this section.”

**Halifax Corporation Act, 1902 (2 Edw. 7, ch. ccxxiv.).**

Section 64 authorises construction of a generating station upon defined lands. As regards such lands there is no provision as to nuisance. Section 47 authorises the purchase of additional land by agreement, but a proviso is added that the corporation shall not create or permit nuisance on such land.

**London County Council (Tramways and Improvements) Act, 1902 (2 Edw. 7, ch. ccxix.).**

Section 26 confers compulsory powers for taking land for generating and transforming station in connection with the working of their tramways. The Act is silent as to nuisance.

**Manchester Corporation Tramways Act, 1902 (2 Edw. 7, ch. xli.).**

Section 7 authorises the erection of generating station, etc., on defined land. The Act is silent as to nuisance.

**Newcastle - upon - Tyne Corporation (Tramways) Extensions Act, 1902 (2 Edw. 7, ch. cxxi.).**

Section 21 authorises the use for the purposes of this Act of a generating station, authorised by an Act of 1899. (See *ante*, p. 62.) The Act is silent as to nuisance.

**Newcastle-upon-Tyne Electric Supply Company's Act, 1902 (2 Edw. 7, ch. xxi.).**

Section 7 authorises the erection of generating stations “on any lands which they may acquire within the area of supply,” but adds the proviso that “nothing in this Act shall exonerate the company from any indictment, action, or other proceeding

for nuisance. . . .” Section 81 of the Schedule to the Act of 1899 is not incorporated. See section 2.

North Metropolitan Tramways Act, 1902 (2 Edw. 7, ch. clxx.).

Section 4 authorises the company to erect a generating station or stations on “any lands for the time belonging to them,” but it is added that nothing in this Act shall exonerate the company from any indictment, action or other proceeding for nuisance, etc.

North Staffordshire Tramways Act, 1902 (2 Edw. 7, ch. ccxxix.).

The Act empowers the company and the Potteries Electric Traction Company, who own tramways and light railways, to work both undertakings from one generating station on land belonging to the companies or one of them. Section 3 authorises the construction of the generating station, and contains the following: “Provided always that nothing in this Act shall exonerate the company or the Potteries Company from any indictment, action or other proceeding for nuisance. . . .”

Northumberland Electric Tramways Act, 1902 (2 Edw. 7, ch. cxiv.).

Section 8 confers compulsory powers, and section 10 authorises the erection of generating stations. The Act is silent as to nuisance.

Norwich Corporation (Electricity, &c.) Act, 1902 (2 Edw. 7, ch. cliii.).

A transfer Act. Section 11 gives power to maintain works for generating electricity, and provides that section 81 of the Schedule to the Electric Lighting (Clauses) Act, 1899, shall not apply.

Preston Corporation Act, 1902 (2 Edw. 7, ch. lix.).

By section 12 the corporation were authorised to use certain defined and scheduled lands for generating stations. By section 13 the corporation were authorised to “acquire by agreement such lands as may be necessary for the purposes

of this Act, and may on such lands and on any lands for the time being belonging to them erect and maintain washing rooms and sheds or shelters for the accommodation of passengers, and also sub-stations with all necessary plant and appliances for transforming, using, and distributing electric energy for traction on the corporation tramways, but nothing in this section shall empower the corporation to create or permit a nuisance on any such lands."

Rothsay Tramways Extension Order Confirmation Act, 1902 (2 Edw. 7, ch. civ.).

By section 6 a generating station, etc., is authorised upon certain defined lands. By section 12 power is given to purchase other lands by agreement, "Provided that the company shall not create or permit the creation or continuance of any nuisance on any such lands."

Scarborough Tramways Act, 1902 (2 Edw. 7, ch. lx.).

By section 48 power is given to acquire scheduled land for generating station, etc. Silent as to nuisance.

Tyneside Tramways and Tramroads Act, 1902 (2 Edw. 7, ch. ccxxxii.).

Section 19 authorises the construction of a generating, etc., station on land to be acquired by agreement, but the section adds that nothing shall exonerate the company from indictment, action, or other proceeding for nuisance, etc.

In the Session of 1902 there were nine Power Acts. Some of these were amending Acts relating to companies already authorised. In the case of all new companies compulsory power to take land was given. As to Newcastle-upon-Tyne Electric Supply Company's Act, see *supra*. In the following Acts section 81 of the Schedule to the Act of 1899 is not incorporated, viz.: Cornwall Electric Power Act, 1902 (2 Edw. 7, ch. xxxiv.); Kent Electric Power Act, 1902 (2 Edw. 7, ch. cxxvii.); Leicestershire and Warwickshire Electric Power Act, 1902 (2 Edw. 7, ch. cxxxi.); and Gloucestershire Electric Power Act, 1902 (2 Edw. 7, ch. lv.), so far as regards generating station. In the Derbyshire and Nottinghamshire Power Act, 1901, section 81 of the Schedule to

Power Acts  
of 1902.

Power Acts of  
1902—*contd.*

the Act of 1899 was incorporated, but so as not to apply to the land therein authorised for generating station. The company obtained another Act in 1902, which recited that the Act of 1901, and also that section 81, would apply to any generating station erected elsewhere than on the lands so described in the Act of 1901, and that, with a view to the more convenient supply of electricity within the area, it was expedient that the restriction so imposed upon the company should be removed. Section 2 accordingly effected this object. The Act is silent as to nuisance. In the South Wales Electrical Power Distribution Company Act, 1902 (2 Edw. 7, ch. cxviii.), section 4 authorised the compulsory taking of land for a generating station. By section 2 the provisions of the Act of 1899 are incorporated "except those not incorporated with the Act of 1900." As to the Act of 1900, see *supra*. The North Metropolitan Electric Power Supply Act, 1902 (2 Edw. 7, ch. clvi.), section 5, authorised the purchase by agreement of certain defined land and the erection thereon of generating stations, etc. There is no provision as to nuisance.

Although compulsory powers to take land were conferred in most of the above cases, it may have been that in many instances the land had been provisionally agreed to be purchased at the time of the passing of the Act.

Generating  
stations out-  
side area of  
supply and  
mains con-  
necting  
separate areas  
of supply.

The following are instances in which Parliament has authorised electric lighting undertakers either to have a generating station outside their area of supply, with connecting mains, or to lay a main connecting separate areas of supply:—Metropolitan Electric Supply Company's Acts, 1898 (61 & 62 Vict. ch. ccxxxv.), and 1901 (second line of cables) (1 Edw. 7, ch. ccxxviii.); Newcastle-upon-Tyne Supply Company's Act, 1900 (63 & 64 Vict. ch. ccxl.); Charing Cross and Strand Electricity Supply Corporation Act, 1900 (63 & 64 Vict. ch. ccxxvii.); Brighton Corporation Act, 1900 (63 & 64 Vict. ch. xcix.). See also section 5 of the confirming Act (2 Edw. 7, ch. ccvi.), confirming provisional orders for, among other places, Hitchin and Stevenage. The Central Electric Supply Company's Act, 1899 (62 & 63 Vict. ch. lxxxviii.), is an instance of an Act successfully promoted by two existing companies to authorise a new company to construct a generating station outside their respective areas

of supply, and thence to lay down mains for supplying in bulk those areas of supply.

Ordinarily where undertakers (whether local authorities or companies) are authorised by provisional orders they have no power to supply energy outside the authorised area of supply. See section 3 (1) and section 4 (2) of the Schedule to the Act of 1899, and the notes thereto, *post*, pp. 157—158.

Supply of electrical energy in neighbouring district.

But where local authorities are authorised to supply electrical energy, Parliament is accustomed, by Act, to confer on them power to supply energy in bulk to adjoining local authorities authorised to supply electrical energy. An ordinary form of clause is as follows:—

“If the local authority for any district adjoining the area which the corporation are for the time being authorised to supply with electric energy are or shall be authorised by Provisional Order confirmed by Parliament to supply energy, or if any company shall be authorised to supply energy in any such district, the corporation and any such local authority or company may, with the approval of the Board of Trade, enter into and carry into effect agreements for the supply of electrical energy in bulk by the corporation to such local authority or company.”

The above clause is taken from the Norwich Corporation (Electricity, &c.) Act, 1902 (2 Edw. 7, ch. cliii., s. 20). The clause employed is not always in the same terms. Cf. Birkenhead Corporation Act, 1902 (2 Edw. 7, ch. lxii., s. 16), which uses the phrase “at or near the boundary of the borough,” and Blackburn Corporation Act, 1901 (1 Edw. 7, ch. ccxxiii., s. 116), which speaks of “any district adjacent or in proximity to or in the neighbourhood of the borough or along the route of any tramway or tramroad owned or worked by the corporation.”

Where the undertakers are a company they do not stand on the same footing, probably owing to the fact that in their case the question of purchase is superadded to the difficulties arising under sections 3 (1) and 4 (2) of the Schedule to the Electric Lighting (Clauses) Act, 1899. See an instance where the power was given: Walker and Wallsend Union Gas Company's (Electric Lighting) Act, 1899 (62 & 63 Vict. ch. ccviii., s. 10). There are some precedents enabling a company to supply outside their area in the case of tramways and railways. See, *e.g.*, Hastings

Supplying  
outside  
districts—  
*contd.*

Tramways Act, 1900 (63 & 64 Vict. ch. cxl., s. 84) ; Portmadoc, Beddgelert, and South Snowdon Railway Act, 1901 (1 Edw. 7, ch. cclxii., s. 42). The case of the Central Electric Supply Company's Act, 1899 (62 & 63 Vict. ch. lxxxviii., s. 38), is exceptional.

Supply of  
electricity for  
traction pur-  
poses.

Where local authorities are authorised to supply electric energy Parliament is accustomed to confer upon them, by Act, power to supply electric energy for traction purposes, partly within and partly without their limits. The following clause is taken from the Blackburn Corporation Act, 1901 (1 Edw. 7, ch. ccxxiii., s. 117) :

“The corporation on the one hand, and any tramway or tramroad company or any company authorised under the Light Railways Act, 1896, to construct a light railway and respectively having power to use electrical energy for traction purposes, partly within and partly without the borough on the other hand, may enter into and carry into effect agreements for and in relation to the supply of electrical energy by the corporation to such company for all or any purposes for which such company are empowered to use the same. Provided that the corporation shall not supply electrical energy in any district without the borough, except with the consent of the local authority of that district, and of any company or person who shall be supplying electrical energy in such district under statutory authority.”

The wording of the clause varies : for instance, in the case of Norwich Corporation (Electricity, &c.) Act, 1902 (2 Edw. 7, ch. cliii., s. 21), the corporation may contract with local authorities as well as companies requiring electric energy for traction purposes. As to companies, see *supra*. The clause in the Walker and Wallsend Union Gas Company's (Electric Lighting) Act, 1899 (62 & 63 Vict. ch. ccviii.), is very wide :

10. “The company on the one hand and any local authority, company, body, or person, authorised by Act of Parliament or Order, confirmed by Parliament to produce or supply energy on the other hand, may enter into and carry into effect agreements for the supply of energy in bulk, to or by the company, by or to such local authority, company, body, or person.”

As to supply  
of electricity  
where con-  
sumer has  
separate  
supply.

The following clause has within the last two years been frequently inserted in Acts of Parliament relating to the supply of electric energy :

- (1) “Notwithstanding anything contained in the Electric Lighting Acts, 1882 and 1888, a person shall not be entitled to demand from the

corporation a supply of electrical energy to premises having a separate supply unless such person shall have previously agreed to pay to the corporation such minimum annual sum as will give to the corporation a reasonable return on the capital expenditure and other standing charges incurred by the corporation to meet the possible maximum demand of such person.

- (2) "In case the corporation and the person demanding such supply of electrical energy shall fail to agree the amount of such minimum annual sum to be paid by such person, the amount of such minimum annual sum shall be fixed by an electrical engineer to be appointed as arbitrator by the President of the Institution of Civil Engineers."

See, *e.g.*, Bury Corporation (Tramways) Act, 1901 (1 Edw. 7, ch. xxii., s. 74); Norwich Corporation (Electricity, &c.) Act, 1902 (2 Edw. 7, ch. cliii., s. 18); Birkenhead Corporation Act, 1902 (2 Edw. 7, ch. lxii., s. 17); Halifax Corporation Act, 1902 (2 Edw. 7, ch. cxxiv., s. 65); Wigan Corporation Act, 1902 (2 Edw. 7, ch. ccxxviii., s. 19).

The following clause is also frequently inserted in Acts of local authorities. The wording of the clause varies.

- "The Corporation may refuse to supply electrical energy to any person whose payments for the supply of electrical energy, or for the hire or sale of electric motors or other electrical apparatus are for the time being in arrear, whether any such payments be due to the corporation in respect of a supply to the premises in respect of which such supply is demanded or in respect of other premises."

Corporation may refuse to supply electrical energy in certain cases.

This clause is taken from the Halifax Corporation Act, 1902 (2 Edw. 7, ch. cxxiv., s. 66); see also Wigan Corporation Act, 1902 (2 Edw. 7, ch. ccxxviii., s. 18).

In the Session of 1902 the Bermondsey Borough Council promoted a provisional order to extend their area of supply so as to embrace the parish of Rotherhithe, which is within their borough. The South Metropolitan Gas Company, being the owners of large gas works in the borough of Bermondsey, and therefore large ratepayers, opposed the confirming Bill, and contended that, if the powers sought by the order could be justified, "provision should be made in the order to ensure the price charged for electricity shall be such as will make the undertaking self-supporting, and that the powers of charging the rates with the deficiency in the income of the Council's undertaking should not be sanctioned."

Instances where local authority prevented from paying deficit on electrical undertaking out of rates.

The Committee of the House of Lords (EARL OF ERNE, Chairman) allowed the confirming Bill to proceed, subject to the insertion of the following clause :

Annual statement and balance-sheet of accounts.

"The Undertakers shall once in every year, after the first year's working of the undertaking, cause to be laid before them a statement and balance-sheet of the accounts of the undertaking, drawn up in accordance with the form of accounts prescribed by the Board of Trade for a local authority under the Electric Lighting Acts, 1882 and 1888, and the Undertakers shall thereupon fix annually the charges to be made for the supply of energy in the then ensuing year at such rates (not exceeding the maximum rates specified in the principal Order), so that as far as is reasonably practicable the revenue for that year shall not be less than the expenditure for that year."

Before the same Committee a similar clause was inserted in the Stoke Newington and Woolwich Provisional Orders respectively. These three provisional orders are confirmed by the same Act (2 Edw. 7, ch. ccvii.). See *Jl. of G. L.*, July 8th, 1902, pp. 99, 100, July 15th, 1902, p. 145 and pp. 157, 159. As regards the Bermondsey Order, see footnote, *ante*, p. 12. The Order of 1902 contained a clause entitling the London Electric Supply Corporation to require the undertakers to purchase so much of the former's undertaking as lies within the parish of Rotherhithe.

Discounts and accounts.

In Acts relating to the supply of electric energy it is now common to find a section authorising discounts, and another section altering the dates for making up accounts so that the same may tally with the municipal year.

Instances where Board of Trade have dispensed with consent of local authorities.

Undoubtedly the Board of Trade pay great regard to the consent of the local authority having been obtained to a provisional order as required by the Act of 1888. Nevertheless there have been many cases in which that consent has been dispensed with by the Board of Trade under the authority of section 1 of that Act. In the Session of 1899, the Charing Cross and Strand Electricity Supply Corporation, Limited, promoted a provisional order for power to supply within the City of London. That area was already being supplied under Parliamentary authority by the City of London Electric Lighting Company, who opposed the granting of the order. The City Corporation withheld their consent as local authority. The Board of Trade dispensed with



the consent and made the order. The confirming Bill (which ultimately was passed) was opposed by the City of London Electric Lighting Company, and also by the City Corporation. The late Sir COURTENAY BOYLE, K.C.B., of the Board of Trade, attended, at their request, before the Committee to whom the confirming Bill was referred.

Consent of  
local  
authority—  
*contd.*

The following is the Parliamentary Shorthand Report :—

*House of Commons.—Minutes of Evidence taken before the Select Committee on Private Bills (Group K.) on the Electric Lighting Provisional Order (No. 20) [City of London] Bill. Friday, July 7th, 1899.*

Colonel GUNTER in the Chair. Mr. BONHAM-CARTER sat as Referee. Sir COURTENAY BOYLE called. Examined by the CHAIRMAN.

2201. As you have taken a great deal of trouble in this case, and made a very long examination *pro* and *con.*, there are one or two points that have come out during the long case in these rooms upon which I want to ask you one or two questions. One is this: Why, in this case, has competition been adopted by the Board of Trade as the ruling principle in granting a Provisional Order for lighting by electricity? Now I will go on to the next: What is the difference between electricity on the one hand and gas and water on the other, that in this respect the practice of your department is to have the supply of gas and water given by one company under a regulated monopoly?—The question of whether in London, and by London, for the moment, I mean the whole Metropolis, and not merely the City, there should or should not be competition, was discussed, and elaborately discussed, in the meeting which you have had references to in this room, held before Sir Francis Marindin. At that inquiry the balance of opinion in the Metropolis, of local authorities and consumers and persons interested, justified Sir Francis Marindin in recommending that there should be competition in the supply of electrical energy.

2202. *Mr. Bonham-Carter*: This was in 1889?—Yes. One of the considerations influencing the Board of Trade in adopting that recommendation was that there are practically two methods of supplying electrical energy. You have had them referred to more than once in this committee room. One is the continuous system, and one is the alternating system, and it was held that it was desirable to give consumers in London the opportunity of choosing whether they would have electricity supplied by the high pressure alternating system or by the continuous system. That was one of the considerations. The other consideration was a very strong expression of Parliamentary

Consent of  
local  
authority---  
*contd.*

opinion given by the Legislature in that section which you have had referred to more than once, namely, that the granting of one Provisional Order could not hinder or restrict the granting of another. That was held by the Board of Trade to be a very decided expression of opinion almost amounting to a mandate to the Board of Trade, not absolutely amounting to a mandate, but very nearly amounting to a mandate to the Board of Trade to allow competition. At any rate, it was held to amount to a mandate to the Board of Trade to consider the expediency of competition, and looking upon it in that sense the Board of Trade decided that competition should be granted in the Metropolis. To that policy they have adhered ever since 1889, and that is our policy at the present moment. I think that answers your question.

2203. Yes, I think so. You very naturally, I need hardly put the question, think that competition in this case is desirable or we should not have had that Provisional Order?—The evidence given before me was very decided upon that point, and convinced me, at any rate, in making my report to the Board of Trade that, in the interests of the consumers in the City of London, competition was desirable.

2204. There is one other thing that I want to ask you. Of course you saw good reason for over-riding the local consent?—The Board of Trade have always hesitated in dispensing with the consent of local authorities to the granting of a Provisional Order, but they have done it in, I will not say a very considerable number, but in a considerable number of instances since 1889. They did it in several instances in 1889, and have done it in every instance since. I have in my pocket a list of cases which you can have if you choose. We hesitate to dispense with the consent because we trust local authorities and rely on their judgment and discretion. We certainly do that in the case of the City of London because we have a very high opinion indeed of the status and wisdom and judgment of the Corporation of London, but in this case we thought the reasons for dispensing with their consent were so strong that we made a special report upon it.

*Mr. Bonham-Carter* : Will you kindly let that list of cases in which you have over-ridden the consent of the local authority go upon the notes.

The following list was handed in :

CASES IN WHICH THE BOARD OF TRADE HAVE DISPENSED WITH THE  
CONSENT OF THE LOCAL AUTHORITY.

1889.

VESTRY OF ST. JAMES', WESTMINSTER.—The London Electric Supply Order, 1889. Vestry supported application of another company

(The Metropolitan), but in allotting districts after Major Marindin's inquiry, the Board of Trade gave this district to the London company.

Consent of local authority—*contd.*

**ST. MARGARET AND ST. JOHN, WESTMINSTER.**—The vestry desired to retain power to supply in their own hands; they attended Major Marindin's inquiry, but would not come to any decision. The Board of Trade divided the district between three companies—the London and Westminster, the Kensington, and the Knightsbridge.

**ST. SAVIOUR'S DISTRICT BOARD OF WORKS.**—The London Electric Supply Order, 1889. Details arranged at Major Marindin's inquiry, but formal consent not given and Board of Trade dispensed.

**LAMBETH VESTRY.**—The London Electric Supply Order, 1889. Metropolitan Order, 1889. — Formal consent not given. Consent dispensed with after Major Marindin's inquiry.

**WANDSWORTH DISTRICT BOARD OF WORKS.**—Consent not given—question of details. The Board of Trade dispensed after Major Marindin's inquiry (Metropolitan Company).

1890.

**MOSS SIDE LOCAL BOARD.**—Moss Side and Stretford Order. The Local Authority originally consented, but subsequently objected to any other district being included in the Order.

1891.

**CHELSEA VESTRY.**—St. Luke Chelsea Order. The Local Authority objected to certain powers *re* appointment of Electric Inspectors being given to the London County Council.

1893.

**NEWMARKET LOCAL BOARD.**—The Local Authority objected on details. Question of overhead wires and breaking up streets during race weeks.

1894.

**GUILDFORD.**—The Local Authority wanted power to purchase after thirty years on Electric Lighting Act terms. The promoters objected, but agreed to thirty-five years. The Local Authority would not consent and the Board of Trade dispensed.

1895.

**STRAND DISTRICT BOARD OF WORKS.**—Charing Cross Company's Order. The Local Authority wanted certain provisions put in Order as to construction of works, which the Board of Trade were not prepared to accept.

Consent of  
local  
authority—  
*contd.*

GRANGE URBAN DISTRICT COUNCIL }  
ULVERSTON URBAN DISTRICT COUNCIL } Windermere and  
ULVERSTON RURAL DISTRICT COUNCIL } District Order.

The Local Authorities wished certain provisions put in the Order which the Board of Trade considered should be left to agreement.

TOXTETH PARK URBAN DISTRICT COUNCIL.—Liverpool Order, 1895.

The Order repealed the Order granted in 1891 and 1892 relating to Liverpool and Toxteth Park. The Local Authority objected to the application of the proposed new provisions to their district, but as the Liverpool Corporation consented and were extending boundaries to include Toxteth Park, the Board of Trade dispensed with the District Council's consent.

1899.

CITY OF LONDON CORPORATION.—Case now before Committee.

GATESHEAD.—The Corporation wanted certain provisions inserted in the Order which the Board of Trade considered should be left to agreement.

(The Witness withdrew.)

The CHAIRMAN: The Committee are of opinion that the Order be confirmed.

The Chairman was directed to report the Order to the House.

---

The following are later instances of consent being dispensed with by the Board of Trade :—

1900.

BATTERSEA ELECTRIC LIGHTING ORDER, 1900.—See Special Report by the Board of Trade, Parliamentary Paper Cd. 195 of 1900.

FRESHWATER AND TOTLAND (I.W.) ELECTRICITY SUPPLY COMPANY, LIMITED, ELECTRIC LIGHTING ORDER.—Parliamentary Paper Cd. 195 of 1900.

MARYLEBONE ELECTRIC LIGHTING ORDER, 1900.—Parliamentary Paper Cd. 195 of 1900.

ROYAL LREAMINGTON SPA ELECTRIC LIGHTING ORDER, 1900.—Parliamentary Paper Cd. 195 of 1900.

STAINES, EGHAM, AND CHERTSEY ELECTRIC LIGHTING ORDER, 1900. —Parliamentary Paper Cd. 195 of 1900.

Consent of  
local  
authority—  
*contd.*

1901.

ST. MARLBORNE ELECTRIC LIGHTING (No. 2) ORDER.—See Parliamentary Paper Cd. 533 of 1901.

NEWBURY ELECTRIC LIGHTING ORDER.—See Parliamentary Paper Cd. 584 of 1901.

PENGE ELECTRIC LIGHTING ORDER.—See Parliamentary Paper Cd. 643 of 1901.

1902.

POKESDOWN ELECTRIC LIGHTING ORDER, 1902.—Parliamentary Paper Cd. 1180 of 1902.

---



## PART II.

---

### THE ACTS, BOARD OF TRADE RULES AND REGULATIONS, ETC.

	PAGE
ELECTRIC LIGHTING ACT, 1882 .....	88
"      "      "      1888 .....	144
"      "      (SCOTLAND) ACT, 1890 .....	151
"      "      "      "      1902 .....	153
"      "      (CLAUSES) ACT, 1899 .....	154
BOARD OF TRADE RULES .....	235
"      "      REGULATIONS A. AND B. ....	243
"      "      "      (NON-STATUTORY UNDERTAKINGS) ..	261
BYE-LAWS OF LOCAL AUTHORITY UNDER PUBLIC HEALTH ACTS AMENDMENT ACT, 1890 (ADOPTIVE) .....	271
FORMS OF ACCOUNTS.....	274
ORDER IN COUNCIL AS TO NEW DENOMINATIONS OF STANDARDS FOR MEASUREMENT OF ELECTRICITY .....	292
BOARD OF TRADE ELECTRICAL STANDARDIZING LABORATORY ...	298
<hr/>	
COUNTY OF LONDON .....	303

*[For Summary of Contents of above Chapter on COUNTY OF  
LONDON, see post, p. 303.]*





# ARRANGEMENT OF THE SECTIONS

## OF THE

# ELECTRIC LIGHTING ACTS.

---

### ELECTRIC LIGHTING ACT, 1882.

(45 & 46 VICT. CAP. 56.)

Section.	Page
1.—Short title .....	p. 88
2.—Application of Act .....	p. 88
3.—Granting of licenses authorising the supply of electricity ....	p. 89
4.—Granting of provisional orders authorising the supply of electricity .....	p. 92
5.—Making of rules as to application, etc., under Act .....	p. 94
6.—Regulations to be inserted in licenses, etc. ....	p. 95
7.—Expenses of local authority .....	p. 97
8.—Power of local authority to borrow money .....	p. 98
9.—Accounts .....	p. 100
10.—General powers of undertakers under license or provisional order .....	p. 101
11.—Power for local authority to contract in certain cases and restrictions on assignments of powers, etc., of undertakers	p. 105
12.—Incorporation of certain provisions of Clauses Consolidation Acts .....	p. 106
13.—Restriction on breaking up of private streets, railways, and tramways .....	p. 108
14.—Restrictions as to above-ground works .....	p. 109
15.—Power to undertakers to alter position of pipes and wires ....	p. 118
16.—Clause for protection of canals .....	p. 114
17.—Compensation for damage .....	p. 115
18.—Undertakers not to prescribe special form of lamp or burner..	p. 115
19.—Obligation on undertakers to supply electricity .....	p. 116
20.—Charges for electricity .....	p. 117
21.—Recovery of charges, etc. ....	p. 120
22.—Injuring works with intent to cut off supply of electricity ....	p. 121
23.—Stealing electricity .....	p. 121
24.—Power to enter lands or premises for ascertaining quantities of electricity consumed, or to remove fittings, etc. ....	p. 121
25.—Electric lines, etc., not to be subject to distress in certain cases	p. 122
26.—Provision for protection of the Postmaster-General .....	p. 128
27.—Purchase of undertaking by local authority .....	p. 129
28.—Arbitration .....	p. 180

Section.	Page
29.—Power for Board of Trade to relieve gas undertakers from obligation to supply gas in certain cases .....	p. 182
30.—Annual report by Board of Trade .....	p. 182
31.—Definition of local authority, etc. ....	p. 183
32.—Interpretation .....	p. 183
33.—For the protection of mines .....	p. 184
34.—Provision as to general Acts .....	p. 184
35.—Saving for privileges of Postmaster-General .....	p. 184
<i>As to Scotland.</i>	
36.—Application of Act to Scotland .....	p. 185
<i>As to Ireland.</i>	
37.—Application of Act to Ireland .....	p. 185
SCHEDULE .....	p. 186

### ELECTRIC LIGHTING ACT, 1888.

(51 & 52 VICT. CAP. 12.)

1.—Consent of local authority generally required to provisional order for supply of electricity .....	p. 144
2.—Repeal of 45 & 46 Vict. c. 56, s. 27 .....	p. 145
Purchase of undertaking by local authority .....	p. 145
3.—Power to vary terms of sale contained in last section .....	p. 146
4.—Restrictions as to placing of electric lines, etc. ....	p. 147
5.—Short title .....	p. 150

### ELECTRIC LIGHTING (SCOTLAND) ACT, 1890.

(53 & 54 VICT. CAP. 13.)

1.—Amendment of schedule of 45 & 46 Vict. c. 56 ( <i>as regards Scotland</i> ) .....	p. 151
2.—Delegation by certain local authorities .....	p. 151
3.—Validation of notices, etc., for present session (1890) .....	p. 152
4.—Interpretation .....	p. 152
5.—Saving .....	p. 152
6.—Short title and extent .....	p. 152

### ELECTRIC LIGHTING (SCOTLAND) ACT, 1902.

(2 EDW. 7, CAP. 35.)

1.—Amount and period of repayment of loans for electric lighting .....	p. 153
2.—Saving .....	p. 153
3.—Short title and extent .....	p. 153

**ELECTRIC LIGHTING (CLAUSES) ACT, 1899.**

(62 &amp; 63 VICT. CAP. 19.)

Section.	Page
1.—Provisions in schedule to be incorporated in Electric Lighting Orders .....	p. 154
2.—Short title, extent, and commencement .....	p. 154

**SCHEDULE.**

1.—Interpretation .....	p. 155
-------------------------	--------

**PROVISIONS AS TO UNDERTAKERS.**

2.—Description of undertakers .....	p. 157
3.—Undertakers not to purchase other undertakings .....	p. 157

**AREA OF SUPPLY.**

4.—Area of supply and prohibition of supply beyond area .....	p. 158
---	--------

**SECURITY AND ACCOUNTS.**

5.—Security for execution of works .....	p. 159
6.—Audit of undertakers' accounts .....	p. 160

**APPLICATION OF MONEY AND PURCHASE OF LAND, ETC., BY LOCAL AUTHORITY.**

7.—Application of money received by local authority as undertakers .....	p. 161
8.—Purchase and use of lands by local authority .....	p. 162
9.—Incorporation of section 265 of Public Health Act, 1875 .....	p. 163

**NATURE AND MODE OF SUPPLY.**

10.—Systems and mode of supply .....	p. 163
--------------------------------------	--------

**WORKS.**

11.—Additional provisions as to works .....	p. 164
12.—Powers for execution of works .....	p. 165
13.—Street boxes .....	p. 165
14.—Notice of works, with plan, to be served on the Postmaster-General and local authority .....	p. 168
15.—As to streets not repairable by local authority, railways, tramways, and canals .....	p. 170
16.—Street authority, etc., may give notice of desire to break up streets, etc., on behalf of undertakers .....	p. 172
17.—As to alteration of pipes, wires, etc., under streets .....	p. 174
18.—Laying of electric lines, etc., near sewers, etc., or gas or water pipes, or other electric lines .....	p. 177
19.—For protection of railway and canal companies .....	p. 179
20.—For protection of telegraphic and telephonic wires .....	p. 179

## COMPULSORY WORKS.

Section.	Page
21.—Mains, etc., to be laid down in streets specified in special order and in remainder of area of supply .....	p. 181
22.—As to laying of electric line under special agreement .....	p. 182
23.—If undertakers fail to lay down mains, etc., order may be revoked .....	p. 182
24.—Manner in which requisition is to be made .....	p. 188
25.—Provisions on requisition by owners or occupiers .....	p. 188
26.—Provisions on requisition by local authority .....	p. 185

## SUPPLY.

27.—Undertakers to furnish sufficient supply of energy to owners and occupiers within the area of supply .....	p. 185
28.—Maximum power .....	p. 187
29.—Supply of energy to public lamps .....	p. 187
30.—Penalty for failure to supply .....	p. 187

## PRICE.

31.—Methods of charging .....	p. 189
32.—Maximum prices .....	p. 189
33.—Other charges by agreement .....	p. 190
34.—Price to public lamps .....	p. 190

## ELECTRIC INSPECTORS.

35.—Appointment of electric inspectors .....	p. 190
36.—Duties of electric inspectors .....	p. 191
37.—Remuneration of electric inspectors .....	p. 191
38.—Notice of accidents and inquiries by Board of Trade .....	p. 192

## TESTING AND INSPECTION.

39.—Testing of mains .....	p. 198
40.—Testing of works and supply on consumer's premises .....	p. 198
41.—Undertakers, not being local authority, to establish testing stations .....	p. 198
42.—Undertakers to keep instruments on their premises .....	p. 194
43.—Readings of instruments to be taken .....	p. 194
44.—Electric inspector may test undertakers' instruments .....	p. 194
45.—Representation of undertakers at testings .....	p. 195
46.—Undertakers to give facilities for testing .....	p. 195
47.—Report of results of testing .....	p. 195
48.—Expenses of electric inspector .....	p. 195

## METERS.

49.—Meters to be used except by agreement .....	p. 196
50.—Meter to be certified .....	p. 196
51.—Inspector to certify meter .....	p. 197
52.—Undertakers to supply meters if required to do so .....	p. 197
53.—Meters not to be connected or disconnected without notice ..	p. 197
54.—Consumer to keep his meter in proper order .....	p. 197
55.—Power to the undertakers to let meters .....	p. 198

Section.	Page
56.—Undertakers to keep meters let for hire in repair .....	p. 198
57.—Differences as to correctness of meter to be settled by inspector .....	p. 198
58.—Undertakers to pay expenses of providing new meters where method of charge altered .....	p. 199
59.—Undertakers may place meters to measure supply or to check measurement .....	p. 199

## MAPS.

60.—Map of area of supply to be made .....	p. 199
--	--------

## NOTICES, ETC.

61.—Notices, etc., may be printed or written .....	p. 200
62.—Service of notices, etc.....	p. 200

## REVOCATION OF SPECIAL ORDER.

63.—Revocation of order where undertakers are insolvent .....	p. 201
64.—Revocation of order where undertaking cannot be carried on with profit .....	p. 201
65.—Revocation where local authority are undertakers and works are not executed .....	p. 202
66.—Revocation of order with consent .....	p. 202
67.—Provisions where order revoked.....	p. 202
68.—Provisions where local authority are undertakers and order is revoked .....	p. 204

## GENERAL.

69.—Remedying of system and works .....	p. 205
70.—Publication of regulations .....	p. 205
71.—Nature and amount of security .....	p. 206
72.—Proceedings of Board of Trade .....	p. 206
73.—Approval or consent of Board of Trade .....	p. 206
74.—Notice of approval of Board of Trade, etc., to be given by advertisement .....	p. 206
75.—Notice of application for extension of time, etc., to be given to local authority .....	p. 207
76.—Recovery and application of penalties .....	p. 207
77.—Undertakers to be responsible for all damages .....	p. 208
78.—As to mortgages .....	p. 208
79.—Saving for Postmaster-General .....	p. 208
80.—Saving rights of the Crown in the foreshore .....	p. 208
81.—Undertakers not exempted from proceedings for nuisance ....	p. 209
82.—Provision as to general Acts .....	p. 210

## APPLICATION TO SCOTLAND.

83.—Application to Scotland .....	p. 210
-----------------------------------	--------

## APPLICATION TO IRELAND.

84.—Application to Ireland .....	p. 210
----------------------------------	--------

---

APPENDIX OF INCORPORATED SECTIONS .....	p. 211
---	--------

# ELECTRIC LIGHTING ACT, 1882.

(45 & 46 VICT. CAP. 56.)

*An Act to facilitate and regulate the supply of Electricity for Lighting and other purposes in Great Britain and Ireland.*

[18th August 1882.]

BE it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :

Short title.

1. This Act may be cited for all purposes as the Electric Lighting Act, 1882.

The Electric Lighting Act, 1888, s. 5, enacts that this Act and that Act are to be read and construed as one Act, and may be cited together for all purposes as the Electric Lighting Acts, 1882 and 1888. As to the effect of the first part of this enactment, see *Commercial Gas Co. v. Scott* (1875), L. R. 10 Q. B. 400; *South Metropolitan Gas Co. v. Noakes* (1889), 61 L. T. 556; and *Dudley Gasworks Co. v. Warmington* (1881), 50 L. J. M. C. 69.

Application  
of Act.

2. The provisions of this Act shall apply to every local authority, company, or person who may by this Act or any license or provisional order granted under this Act, or by any special Act to be hereafter passed, be authorised to supply electricity within any area (in this Act referred to as "the undertakers") and to every undertaking so authorised, except so far as may be expressly provided by any such special Act; and every such license, provisional order, and special Act, is in this Act included in the expression "license, order, or special Act."

This Act and the Act of 1888 (and in Scotland the Acts of 1890 and 1902 also) apply to every authorised undertaking without the necessity of incorporating the same with the licence, provisional order, or special Act.

Though the Acts of 1882, 1888, and 1899 are called "Lighting" Acts they do not contain anything to prevent the use of the electrical energy for purposes of power. "Private purposes" include power. See evidence of the late Sir Courtenay Boyle, K.C.B., before the Committee on Municipal Trading. (Parliamentary Paper, 1900, 805.)

By the Electric Lighting (Clauses) Act, 1899, s. 1, the provisions contained in the schedule to that Act shall be incorporated with and form part of every

provisional order made by the Board of Trade after the commencement of that Act.

In the absence of any provisions to the contrary in Power Acts the Acts of 1882, 1888, and (as regards Scotland) 1890 will apply to such Acts. The Power Acts expressly exclude from incorporation various portions of these Acts. In some cases the Act of 1888 is excluded altogether, and in others only those sections which relate to purchase. See this matter fully treated in the Chapter on POWER ACTS.

**Sect. 2.****NOTE.**

**3.** The Board of Trade may from time to time license (a) any local authority as defined by this Act, or any company (b) or person to supply electricity under this Act for any public or private purposes within any area, subject to the following provisions :

Granting of  
licenses  
authorising  
the supply of  
electricity.

(1.) The consent of every local authority having jurisdiction within the area or any part of the area within which a supply is licensed to be furnished shall be required to the application for a license (c), which consent such local authority is hereby authorised to give, with such conditions (if any) as, subject to the approval of the Board of Trade, the local authority may prescribe :

(2.) A license shall be for any period not exceeding seven years, but may, at or after the expiration of such license, be renewed from time to time for a like period with such consent as above mentioned upon such terms and conditions as the Board of Trade may determine :

(3.) "Public purposes" shall mean lighting any street or any place belonging to or subject to the control of the local authority, or any church or registered place of public worship, or any hall or building belonging to or subject to the control of any public authority, or any public theatre, but shall not include any other purpose to which electricity may be applied :

(4.) "Private purposes" shall include any purposes whatever to which electricity may for the time being be applicable, not being public purposes, except the transmission of any telegram (d) :

(5.) Every local authority, company, or person applying for a license shall publish notice (e) of their application by public advertisement in such manner and including such particulars as the Board of Trade may from time to time direct or approve; and such license shall not be granted by the Board of Trade until after the expiration of a period of three months from the date of the first publication of such advertisement, nor until opportunity has

**Sect. 3 (5).**

been given to all parties interested to make representations or objections to the Board of Trade with reference to the application :

- (6.) No application for a license shall be made by any local authority except in pursuance of a resolution to be passed at a special meeting of the local authority, and such special meeting shall only be held after one month's previous notice of the same and of the purpose thereof has been given in the manner in which notices of meetings of such local authority are usually given (*f*) :
- (7.) A license may, subject to the provisions of this Act, be granted to a local authority authorising them to supply electricity within any area although the same or some part thereof may not be included within their own district (*g*) :
- (8.) The license may make such regulations as to the limits within which and the conditions under which a supply of electricity is to be compulsory or permissive, and for enforcing the performance by the licensees of their duties in relation to such supply, and for the revocation of the license where the licensees fail to perform such duties, and generally may contain such regulations and conditions as the Board of Trade may think expedient (*h*) :
- (9.) Where in any area or part of an area in which any undertakers are authorised to supply electricity under any license the undertakers are not themselves the local authority, the license may contain any provisions and restrictions for enabling the local authority within whose jurisdiction such area or part of an area may be to exercise any of the powers of the undertakers under this Act with respect to the breaking up of any street repairable by such local authority within such area or part of an area, and the alteration of the position of any pipes or wires being under such street, and not being the pipes or wires of the undertakers, on behalf and at the expense of the undertakers, and for limiting the powers and liabilities of the undertakers in relation thereto, which the Board of Trade may think expedient (*i*).

Licences now  
seldom  
applied for.

(a) Licences are now rarely applied for. Their object was experimental, and electric lighting has long passed the experimental state. It is therefore usual now to apply for a provisional order when power is sought to supply electricity for lighting and other purposes. There are, however, many instances of procedure by Bill in the usual way. In regard to power, the



procedure is usually by Bill, but not always; see, *e.g.*, Midland Electric Power Distribution and Lighting Orders of 1898, 1899, 1900 and 1901. As to Bills promoted by municipal authorities, regard must be had to s. 10 of the Borough Funds Act, 1872 (35 & 36 Vict. c. 91), which provides that "The provisions of this Act shall not extend to applications for any Bill in Parliament for any object which would, for the time being, be attainable by provisional order." There are many instances, however, where governing bodies within the meaning of that Act, having to come to Parliament for powers in relation to other matters, have included powers in relation to electricity.

**Sect. 3.**

NOTE.

A licence and a provisional order used, as regards their form and contents, to be identical save as regards the period of duration, as to which see sub-s. (2). The effect of the Electric Lighting (Clauses) Act, 1899, is to shorten the length of provisional orders. It does not apply to licences.

When applications for provisional orders authorising the supply of electricity within the district of any local authority are received by the Board of Trade from such local authority, and also from any other authority, company, or person, the Board of Trade will give a preference to the application of the local authority of the district in every case where, in the opinion of the Board of Trade, no special circumstances exist which render such a preference inexpedient. See note appended by the Board of Trade to their Rules, *post*, p. 241.

Local authority applying have preference.

In cases of applications for a licence, renewal of licence, or provisional order, to which objection is made by any person locally interested, the Board of Trade will, if they consider it expedient, hold a local inquiry, of which due notice will be given.

Local inquiry.

(b) Defined to mean "any body of persons corporate or unincorporate" (s. 82).

Definition of "company."

(c) By the Electric Lighting Act, 1888, s. 1, this consent is now required in the case of a provisional order also; but if it be refused, the Board of Trade have power to dispense with the same where they are of opinion that, having regard to all the circumstances of the case in which the consent of the local authority is refused, such consent ought to be dispensed with. See *post*, p. 144, and *ante*, p. 6.

Consent of local authority.

When applicants for a provisional order request the Board of Trade to dispense with the consent of the local authority, they must give the reasons for such request. Rule II., p. 285.

Copies of any agreement entered into with the local authority relating to such consent must be deposited with the Board of Trade at the time of proving consent. Rule III., p. 285.

Consent must be given by resolution passed at a meeting of the local authority held after previous notice of the same and of the purpose thereof. See further, Rule IV., p. 235.

See further, *ante*, p. 10, as to the dates and periods to be observed.

(d) By s. 82 "the expression 'telegram' has the same meaning as in the Telegraph Act, 1869." By s. 3 of the last-mentioned Act it is provided that "the term 'telegram' shall mean any message or other communication transmitted or intended for transmission by a telegraph." "Telegraph" is

Definition of "telegram."

Definition of "telegraph."

**Sect. 3.****NOTE.**

defined in the Telegraph Act, 1868, s. 8, to mean "a wire or wires used for the purpose of telegraphic communication, with any casing, coating, tube, or pipe enclosing the same, and any apparatus connected therewith for the purpose of telegraphic communication;" and in the Act of 1869, s. 8, it is provided that "the term 'telegraph' shall, in addition to the meaning assigned to it in the Telegraph Act, 1868, mean and include any apparatus for transmitting messages or other communications by means of electric signals."

The  
telephone.

In *Att.-Gen. v. Edison Telephone Co.* (1880), 6 Q. B. D. 244, it was held that Edison's telephone, for which patents were granted in 1877 and 1878, was a "telegraph" within the meaning of the Telegraph Acts, 1868 and 1869, although the telephone had not been invented or contemplated in 1869, and that a conversation through the telephone was a "message," or at all events a "communication transmitted by telegraph," and was therefore a "telegram" within the meaning of those Acts.

Notices.

(e) The Board of Trade Rules require that this notice must be given by public advertisement containing certain particulars, and also require certain documents to be deposited. See further, Rules XIII. *et seq.*, p. 289, and *ante*, p. 7.

In addition to the notice above referred to, it is provided by Rule V. that any local authority, company, or person intending to apply for a licence or provisional order must at the time of lodging their memorial with the Board of Trade, in the case of a licence, and on or before November 1st in the case of a provisional order, give notice in writing of their intended application to every local authority, company, or person authorised to supply electricity under statutory powers within the district to which the proposed application refers. See p. 286.

Borough  
Funds Act,  
1872.

(f) A provisional order is not "a local and personal Bill" within the meaning of the Borough Funds Act, 1872 (35 & 36 Vict. c. 91), s. 2. In order, therefore, to obtain a provisional order it is not necessary for a local authority to comply with the requirements of that Act.

Land.

A provisional order confers no power to take land compulsorily. See further, *ante*, p. 18, and pp. 61—70.

(g) See s. 4 (1), as to notice to the local authority in the case of a provisional order.

(h) By the next section the provisions of this section in regard to licences are made applicable to provisional orders also. On the subject of revocation of provisional orders, see further *ante*, p. 45.

(i) See s. 16 of Schedule to the Electric Lighting (Clauses) Act, 1899, *post*, p. 172.

Granting of  
provisional  
orders  
authorising  
the supply of  
electricity.

4. The Board of Trade may, from time to time, by provisional order (a) authorise any local authority, company (b), or person to supply electricity for any public or private purposes within any area, without requiring such consents (c) as are required to the granting a license under this Act, and for such period, whether limited or unlimited, as the Board of Trade may think proper, but

in all other respects subject to the like provisions as in the last section contained with respect to licenses (d), and subject also to the following provisions :—

Sect. 4.  
—

- (1.) No provisional order shall authorise the supply of electricity by any undertakers within the district of any local authority (not being themselves the undertakers), unless notice that such provisional order has been or is intended to be applied for has been given to such local authority by the applicants in such manner as the Board of Trade may direct or approve (e) on or before the first day of July in the year in which such application is made; provided that in the case of any application made during the present year such notice shall be deemed to have been given in due time if the same is given within one month after the passing of this Act :
- (2.) The Board of Trade may submit to Parliament for confirmation any provisional order granted by it in pursuance of this Act, but any such order shall be of no force unless and until it is confirmed by Act of Parliament :
- (3.) If, while the Bill confirming any such order is pending in either House of Parliament, a petition is presented against any order comprised therein, the Bill, so far as it relates to such order, may be referred to a select committee, and the petitioner shall be allowed to appear and oppose as in the case of private Bills :
- (4.) Any Act confirming any provisional order granted in pursuance of this Act may, on the application of the undertakers thereby authorised to supply electricity, be repealed, altered, or amended by any subsequent provisional order granted by the Board of Trade and confirmed by Parliament.

(a) See note (a) to preceding section.

(b) The expression "company" means "any body of persons corporate or unincorporate" (s. 32). Company.

Gas companies existing under statutory authority may obtain power from Parliament to make application for a provisional order under the Electric Lighting Acts to produce and supply electricity for public and private purposes. There are numerous instances of such power having been conferred upon companies and upon local authorities. There is a clause to this effect in the Model Gas Bill (cl. 35). For an instance where a statutory gas company having no such power promoted and obtained a special Act, see Walker and Wallsend Union Gas Act, 1899. A company registered under

**Sect. 4.****NOTE.**

the Companies Acts, 1862 to 1898, may by special resolution under the Companies (Memorandum of Association) Act, 1890 (58 & 54 Vict. c. 62), alter the provisions of its memorandum of association or deed of settlement with respect to the objects of the company so far as may be required for any of the purposes thereafter specified (s. 1 (1)). One of the purposes specified is "to carry on some business or businesses which under existing circumstances may conveniently or advantageously be combined with the business of the company" (s. 1 (5)). Under the foregoing powers applications have been successfully made to the court to confirm special resolutions to enable a gas and water company to supply electricity. For examples, see *Colombo Gas and Water Co., Limited*; *Jl. of G. L.*, July 20th, 1896, p. 179; *Hoylake and West Kirby Gas and Water Co., ib.*, November 10th, 1896, p. 911; *Harrington (Cumberland) Gas Light Co., Electrician*, April 6th, 1900, p. 872; and *Jl. of G. L.*, April 8rd, 1900, p. 878; *In re Fleece Mills Co., Limited*, *Jl. of G. L.*, June 11th, 1901, p. 1,577; and *Uppingham Gas Co., Electrician*, June 28th, 1901, p. 884; *Jl. of G. L.*, June 25th, 1901, p. 1,758; and see *Rugeley Gas Co.*, W. N. [1899] 127. A telephone company was allowed to alter its memorandum so as to supply electricity for other than telephonic purposes, on condition of making a suitable change of name; *In re Oriental Telephone Co.*, W. N. [1891] 153. A tramway company also obtained similar powers; *Leamington and Warwick Tramways, etc., Co., Electrician*, July 18th, 1902, p. 529; *El. Rev.*, July 18th, 1902, p. 100.

Consent of  
local  
authority.

(c) The Electric Lighting Act, 1888, s. 1, makes the consent of the local authority necessary in the case of provisional orders also, but gives to the Board of Trade a power of dispensing therewith. See note (c) to preceding section.

(d) See notes to preceding section.

Notice to  
local  
authority.

(e) The notice must be in writing, and must be served either by leaving the same at the offices of the local authority or by forwarding the same by post in a registered letter. See further, Rule VII., p. 236. Rule VI. provides that except in the case of an application by the local authority for the district, a provisional order will not be granted except to the body or person by whom the notice required by the above sub-section is given. See p. 236.

Making of  
rules as to  
application,  
etc., under  
Act.

**5.** The Board of Trade may from time to time make, and when made may rescind, alter, or repeal rules (a) in relation to the applications for licenses or provisional orders, and to the payments to be made in respect thereof, and to the publication of notices and advertisements, and the manner in which and the time within which representations or objections with reference to any application are to be made, and to the holding of local inquiries in such cases as they may think it advisable, and to any other matters arising under this Act.

Any rules made in pursuance of this section shall be deemed to be within the powers conferred by this Act, and shall be of the same force as if enacted in this Act, and shall be judicially noticed.

Any rules made in pursuance of this section shall be laid before Parliament within three weeks after they are made if Parliament be then sitting, and if Parliament be not then sitting, within three weeks after the beginning of the next session of Parliament.

**Sect. 5.**  
—

(a) The rules now in force are dated September, 1899. See pp. 285 *et seq.*

All applications for provisional orders or licences must be made by memorial to the Board of Trade, and the memorial must be accompanied by a draft of the proposed order or licence and by various other deposits. For a summary of the procedure and of the dates and periods to be observed in the course of the promotion of the provisional order or licence, see *ante*, p. 10.

**6.** The undertakers shall be subject to such regulations and conditions as may be inserted in any license, order, or special Act affecting their undertaking with regard to the following matters :

Regulations  
to be inserted  
in licenses,  
etc.

The Electric Lighting (Clauses) Act, 1899, embraces the clauses dealing with these matters, which used formerly to be inserted in provisional orders. See *post*, pp. 154 *et seq.*

This section is excluded from incorporation by two of the Power Acts. These Acts, however, incorporate s. 10 of the Schedule to the Act of 1899, *post*, p. 168. See more fully the chapter on those Acts, *post*.

- (a.) The limits within which and the conditions under which a supply of electricity is to be compulsory or permissive ;
- (b.) The securing a regular and efficient supply of electricity ;
- (c.) The securing the safety of the public from personal injury, or from fire or otherwise ;
- (d.) The limitation of the prices to be charged in respect of the supply of electricity ;
- (e.) The authorising inspection and inquiry from time to time by the Board of Trade and the local authority ;
- (f.) The enforcement of the due performance of the duties of the undertakers in relation to the supply of electricity by the imposition of penalties or otherwise, and the revocation of the license, order, or special Act where the undertakers have, in the opinion of the Board of Trade, practically failed to carry the powers granted to them into effect within a reasonable time, or discontinued the exercise of such powers ; and
- (g.) Generally with regard to any other matters in connexion with the undertakings.

**Sect. 6.**  

---

Provided always, that the Board of Trade may, from time to time, make such regulations (a) as they may think expedient for securing the safety of the public from personal injury or from fire or otherwise, and may from time to time amend or repeal any regulations which may be contained in any such license, order, or special Act in relation thereto; and any regulations so made or amended by the Board of Trade shall, from and after the date thereof, have the like effect in every respect as though they had been originally inserted in the license, order, or special Act authorising the undertaking, and every regulation so repealed shall, from and after the date thereof, be repealed accordingly, but such repeal shall not affect any liability or penalty incurred in respect thereof prior to the date of such repeal or any proceeding or remedy which might have been had in relation thereto.

Any local authority within any part of whose district electricity is authorised to be supplied under any license, order, or special Act may, in addition to any regulations which may be made under the preceding provisions of this section for securing the safety of the public, from time to time make, rescind, alter, or repeal byelaws (b) for further securing such safety; and there may be annexed to any breach of such byelaws such penalties to be recovered in a summary manner as they may think necessary: Provided always, that no such byelaws shall have any force or effect unless and until they have been confirmed by the Board of Trade and published in such manner as the Board of Trade may direct.

(a) For the regulations now in force, see *post*, p. 248, and see *ante*, p. 18.

**Byelaws.**

(b) No byelaws have ever been made and sanctioned under this section. The power given to a local authority to make byelaws under this section appears to contemplate the case of the undertakers being other than the local authority. Where local authorities are themselves the undertakers Parliament has in recent years repeatedly given to them special power to make such byelaws. In 1897, 1898, and 1899 there are some instances where such authority has been given without provision being made for approval of the Board of Trade as a condition of the validity of the byelaws. In 1900, and subsequently, there has been an all but uniform practice for Parliament to require the approval of the Board of Trade. No byelaws under this class have been submitted to or approved of by the Board of Trade up to the present time. As regards byelaws by local authorities, being undertakers, which do not require the approval of the Board of Trade, such byelaws have been made in a few instances only. The Institution of Electrical Engineers have from time to time published Forms of Byelaws as suggestions for adoption. It is believed that a revised edition will shortly be published.

Part II. of the Public Health Acts Amendment Act, 1890 (53 & 54 Vict. c. 59), contains powers to urban authorities to make byelaws for prevention of danger or obstruction to the public from posts, wires, tubes, or any other apparatus stretched or placed above, over, along, or across any street (whether before or after the adoption of that part of the Act), for the purpose of any telegraph, telephone, lighting, railway, signalling, or other purpose. These byelaws are not to take effect unless confirmed by the Board of Trade. This Act of 1890 is an adoptive Act, and is of no force until adopted. Part II. may be adopted by urban authorities (s. 3); but the Local Government Board may invest rural authorities with urban powers for the purposes of the Act (s. 5). It contains an express saving on behalf of electric undertakings having statutory authority, s. 15 providing that—

Sect. 6.

NOTE.

“(1) Nothing contained in this part of this Act shall—

Savings.

(a.) Extend to any post, wire, tube, or other apparatus or property of the Postmaster-General :

(b.) Extend to any works of any undertakers within the meaning of the Electric Lighting Acts, 1882 to 1888, to which the provisions of those Acts apply. . . .”

The form of byelaws generally approved by the Board of Trade when Part II. has been duly adopted is as set out later (see p. 271).

The above Act of 1890 does not apply to the administrative county of London (s. 2 (2)). See the Chapter on COUNTRY OF LONDON, *post*, p. 808.

7. Any expenses incurred by a local authority under this Act, and not otherwise provided for, including any expenses incurred in connexion with the obtaining by them, or any opposition to the obtaining by any other local authority, company, or person, of any license, order, or special Act under this Act, may be defrayed out of the local rate as defined in the schedule to this Act (a), and the local authority may from time to time cause such rates to be levied as may be necessary for the purpose of defraying such expenses ; provided that where such local authority is a rural sanitary authority such expenses shall be deemed to be special expenses within the meaning of the Public Health Act, 1875 (b).

Expenses of local authority.

38 &amp; 39 Vict. c. 55.

(a) See Schedule, at p. 186. In the case of an urban district council the local rate is “the fund or rate applicable to the general purposes of the Public Health Act, 1875, in the district, or any other fund or rate applicable to lighting under any local Act.” In the case of a rural district council the local rate is “the rate or rates out of which special expenses incurred in respect of the contributory place or places comprised within the area of supply are payable under the Public Health Act, 1875.”

(b) Under the Public Health Act, 1875, special expenses are made a separate charge on each contributory place (s. 229).

As to taxation of the costs of promoting or opposing provisional orders, see House of Commons Costs Taxation Acts, 1847 and 1879 (10 & 11 Vict. c. 69, and 42 & 43 Vict. c. 17), s. 1, and House of Lords Costs Taxation Act, 1849 (12 & 13 Vict. c. 78), and see *In re Morley* (1875), L. R. 20 Eq. 17 ; and *In re Baker, Lees and Co.*, W. N. (1902) 229.

**Sect. 8.**

Power of  
local  
authority to  
borrow  
money.

**8.** A local authority authorised to supply electricity by any license, order, or special Act may from time to time borrow money on such security, with such consent and subject to such provisions and restrictions with respect to borrowing and the repayment of loans, as are in the schedule to this Act in that behalf mentioned (*a*), and the money so borrowed shall be deemed to be borrowed under the enactments subject to the provisions and restrictions of which it is borrowed, and the accounts of all receipts and expenditure by the local authority in pursuance of this Act, or any license, order, or special Act, shall be subject to such audit as is in the said schedule in that behalf mentioned (*b*): Provided always, that any moneys borrowed under this section by the local authority of any district to which the Local Loans Act, 1875 (*c*), extends, may, if it is thought fit, be borrowed in manner provided by that Act; and in the construction of the said Act for the purposes of this Act the expression "prescribed" means prescribed by any conditions imposed by the authority whose consent is required to borrowing under this section.

38 & 39 Vict.  
c. 83.

Where any local authority is authorised by any Act to raise any money which they may be empowered to borrow for certain purposes by the issue of corporation or other stock, any money which a local authority may be authorised to borrow under this section may, if it is thought fit, be raised by them by the issue of such stock as aforesaid.

This section shall not apply to the mayor, commonalty, and citizens of the city of London or to the Metropolitan Board of Works (*d*), except in so far as the Metropolitan Board of Works (*d*) may be concerned in the borrowing of any money by any vestry or district board.

(*a*) See the annotations to the Schedule. The consent required is that of the Local Government Board in England, the Secretary for Scotland in Scotland, and the Local Government Board in Ireland for Ireland. The provisions and restrictions with respect to borrowing and the repayment of loans are (in the case of both urban and rural authorities in England) those contained in ss. 238, 234, and 236—239 of the Public Health Act, 1875.

Section 238 authorises any local authority, with the sanction of the Local Government Board, to borrow and re-borrow at interest.

Regulations  
as to exercise  
of borrowing  
powers.

"234. The exercise of the powers of borrowing conferred by this Act shall be subject to the following regulations; (namely,)

"(1.) Money shall not be borrowed except for permanent works (including under this expression any works of which the cost ought in the opinion of the Local Government Board to be spread over a term of years):



**Sect. 8.****NOTE.**

- "(2.) The sum borrowed shall not at any time exceed, with the balances of all the outstanding loans contracted by the local authority under the Sanitary Acts and this Act, in the whole the assessable value for two years of the premises assessable within the district in respect of which such money may be borrowed :
- "(3.) Where the sum proposed to be borrowed with such balances (if any) would exceed the assessable value for one year of such premises, the Local Government Board shall not give their sanction to such loan until one of their inspectors has held a local inquiry and reported to the said Board :
- "(4.) The money may be borrowed for such time, not exceeding sixty years, as the local authority, with the sanction of the Local Government Board, determine in each case ; and, subject as aforesaid, the local authority shall either pay off the moneys so borrowed by equal annual instalments of principal or of principal and interest, or they shall in every year set apart as a sinking fund and accumulate in the way of compound interest by investing the same in the purchase of Exchequer bills or other Government securities, such sum as will with accumulations in the way of compound interest be sufficient, after payment of all expenses, to pay off the moneys so borrowed within the period sanctioned.
- "(5.) A local authority may at any time apply the whole or any part of a sinking fund set apart under this Act in or towards the discharge of the moneys for the repayment of which the fund has been established : Provided that they pay into the fund in each year and accumulate until the whole of the moneys borrowed are discharged, a sum equivalent to the interest which would have been produced by the sinking fund or the part of the sinking fund so applied :
- "(6.) Where money is borrowed for the purpose of discharging a previous loan, the time for repayment of the money so borrowed shall not extend beyond the unexpired portion of the period for which the original loan was sanctioned, unless with the sanction of the Local Government Board, and shall in no case be extended beyond the period of sixty years from the date of the original loan.

"Where any urban authority borrow any money for the purpose of defraying private improvement expenses, or expenses in respect of which they have determined a part only of the district to be liable, it shall be the duty of such authority, as between the ratepayers of the district, to make good, so far as they can, the money so borrowed, as occasion requires, either out of private improvement rates, or out of a rate levied in such part of the district as aforesaid."

Section 236, form of mortgage ; s. 237, register of mortgages ; s. 238, transfer of mortgages ; s. 239, receiver may be appointed in certain cases.

A provisional order authorising an electric lighting undertaking came into operation on June 27th, 1892. It gave a municipal corporation power to purchase the undertaking compulsorily on terms of issuing or transferring to the undertakers such an amount of the corporation stock "as will produce by the interest thereon an annuity of 5 per cent." on capital properly expended.

**Sect. 8.****NOTE.**

Another provisional order, coming into operation on June 28th, 1892, took away a power the corporation had, but had not exercised, to issue irredeemable stock. The statutes confirming the two orders received the Royal assent on June 27th, 1892:—*Held*, (1) that the statutory price for the undertaking was an amount of irredeemable stock; (2) that the corporation were not by implication authorised to issue irredeemable stock for the purpose of purchasing the undertaking; and (3) that, therefore, the power to purchase compulsorily was in abeyance so long as the corporation had no power to issue irredeemable stock. *Sheffield Corporation v. Sheffield E. L. Co.*, [1898] 1 Ch. 208.

(b) As to audit of the accounts where the undertakers are a local authority, see the notes to the schedule at p. 139. In the case of orders in favour of companies or persons, s. 6 of the schedule to the Electric Lighting (Clauses) Act, 1899, requires the accounts to be audited by "some competent and impartial person" appointed by them. See p. 160.

(c) By the Local Loans Act, 1875 (which does not extend to Scotland or Ireland), local authorities when entitled to borrow are authorised to issue debenture stock or annuity certificates, the loan being repayable in twenty years where no period is prescribed. This Act has been amended by the Local Loans Sinking Funds Act, 1885 (48 & 49 Vict. c. 80).

(d) The London County Council now take the place of the Metropolitan Board of Works (Local Government Act, 1888, s. 40 (8)).

**Accounts.**

9. The undertakers shall on or before the twenty-fifth day of March in every year fill up an annual statement of accounts of the undertaking made up to the thirty-first day of December then next preceding; and such statement shall be in such form and shall contain such particulars and shall be published in such manner as may from time to time be prescribed in that behalf by the Board of Trade.

The undertakers shall keep copies of such annual statement at their office, and sell the same to any applicant at a price not exceeding one shilling a copy.

In case the undertakers make default in complying with the provisions of this section, they shall be liable to a penalty not exceeding forty shillings for each day during which such default continues.

The forms of accounts prescribed by the Board of Trade in the case of local authorities and companies respectively will be found *post*, pp. 274 and 282.

The section in the text contemplates the annual accounts being made up to the 31st day of December in each year. This date for making up the accounts has been found inconvenient, inasmuch as under the Local Government (England and Wales) Act, 1888 (51 & 52 Vict. c. 41), it is enacted that the local financial year shall be the twelve months ending the 31st day of

March; and the accounts of all county councils and urban and rural authorities are now made up in conformity with that enactment; and as to parishes, see the Local Government Act, 1894 (56 & 57 Vict. c. 78). Accordingly, of late years, whenever a municipal corporation authorised to supply energy has been in Parliament with a Bill for any purpose, it has been the practice to insert a clause to the effect that the above section shall be read as if the 24th of June and the 31st of March were therein inserted instead of 25th March and 31st December. The instances of this are numerous.

Sect. 9.

NOTE.

10. The undertakers may, subject to and in accordance with the provisions and restrictions of this Act, and of any rules made by the Board of Trade in pursuance of this Act, and of any license, order, or special Act authorising or affecting their undertaking, and for the purpose of supplying electricity, acquire such lands by agreement, construct such works, acquire such licenses for the use of any patented or protected processes, inventions, machinery, apparatus, methods, materials, or other things, enter into such contracts, and generally do all such acts and things as may be necessary and incidental to such supply.

General powers of undertakers under license or provisional order.

This section is excluded from incorporation by three of the Power Acts, and other provisions on the subject are substituted. See the chapter on POWER ACTS, *post*.

By s. 17 (*post*, p. 115) it is provided that "in the exercise of the powers in relation to the execution of works . . . the undertakers shall cause as little detriment and inconvenience, and do as little damage as may be, and shall make full compensation to all bodies and persons interested for all damage sustained by them by reason of or in consequence of the exercise of such powers . . ."

Section 82 provides that "the expression 'works' means and includes electric lines, also any buildings, machinery, engines, works, matters, or things of whatever description required to supply electricity and to carry into effect the object of the undertakers under this Act." For definition of "electric line" see same section. See p. 188.

Works.

In addition to the general powers above-mentioned, the Electric Lighting (Clauses) Act, 1899, contains general provisions for the execution of works, various specific provisions with regard to street boxes, the breaking up of streets, alteration of pipes, etc. See ss. 11—20.

As to above-ground works, such as overhead wires, see s. 14, p. 109 and notes thereto, and s. 10 of the Schedule to the Act of 1899, *post*, p. 168.

The power given by the above section to purchase land by agreement contains no restriction as to quantity. Companies sometimes find it expedient to acquire more land than is actually required for their works in order to avoid complaints of vibration or other nuisance. It has not been the practice to insert any clause in orders in favour of companies or persons limiting the quantity of land which they may acquire. On the other hand, there has always been inserted in orders in favour of local authorities a clause

Land.

**Sect. 10.** limiting the amount of land to be used to five acres. See now s. 8 of the Schedule to the Electric Lighting (Clauses) Act, 1899, p. 162.

**NOTE.**

Under the Standing Orders of both Houses of Parliament, where a Bill is promoted for a special Act to construct any station for generating electric power, the Parliamentary notices must set forth and specify the limits within which such generating station is intended to be made or constructed; and a clause must be inserted in the Bill defining the said limits. Standing Orders, House of Lords, 5 and 189; Standing Orders, House of Commons, 5 and 188.

**Nuisance.**

If one creates on his own land an electric current for his own purposes, and discharges it into the earth beyond his control, he is, on the principle of *Fletcher v. Rylands* (1868), L.R. 8 H. L. 380, as responsible for damage caused by that current as he would have been if, instead, he had discharged a stream of water. Nevertheless, where the act is done in pursuance of statutory authority (*e.g.*, provisional order confirmed by Parliament) it is protected to the same extent as other nuisances under statutory authority, where there is no clause to the effect that nothing in the Act shall exempt the undertakers from indictment or other proceedings for nuisance. Therefore where a tramway company, acting under a provisional order and using the best known system of electrical traction, caused electrical disturbance in the wires of a telephone company acting under licence from the Postmaster-General, it was held that the tramway company were protected from liability for nuisance. *National Telephone Co. v. Baker*, [1893] 2 Ch. 186.

Since the above case was decided it has become the practice to insert in provisional orders under the Electric Lighting Acts an enactment to the effect that "nothing in this order shall exonerate the undertakers from any indictment, action, or other proceedings for nuisance in the event of any nuisance being caused by them." An enactment to that effect is contained in the Electric Lighting (Clauses) Act, 1899. See s. 81 of the Schedule, p. 209. On the subject of Nuisance see further, *ante*, pp. 19 and 61—70.

An electric lighting company erected powerful engines and other works on land near to a house which was subject to a lease. Owing to excavations for the foundations of the engines, and to vibration and noise from the working of them, structural injury was caused to the house, and annoyance and discomfort to the lessee. The lessee and the reversioners brought separate actions against the company for an injunction and damages in respect of the nuisance and injury thus occasioned. *KEKEWICH, J.*, after finding on the evidence that the defendants had created a continuing nuisance as regards the lessee and had caused structural injury to the house, held, that both the lessee and the reversioners were entitled to relief, but under the circumstances, by way of damages and not of injunction. The plaintiffs in both actions appealed against the refusal of the injunction; and the Court of Appeal held that there was nothing in either case to justify the court in refusing to aid, by injunction, the legal rights which had been established, and that the appeal must be allowed. *Shelfer v. City of London E. L. Co.*; *Meux's Brewery Co. v. City of London E. L. Co.*, [1895] 1 Ch. 287. See further, [1895] 2 Ch. 388.

**Factory Acts.** As to the application of the Factory Acts to works for generating or transforming electricity, see *ante*, p. 52.

See cases relating to the construction of street boxes and transforming stations noted under s. 18 of the schedule to the Electric Lighting (Clauses) Act, 1899, *post*, p. 165.

**Sect. 10.****NOTE.**

Street boxes,  
etc.

Contracts.

The Public Health Act, 1875, s. 174, contains special provisions with respect to contracts by a local authority. Those who enter into contracts with local authorities must see that those provisions are observed. See *Hunt v. Wimbledon L. B.* (1878), 4 C. P. D. 48; *Young v. Corporation of Leamington* (1888), 8 App. Cas. 517; *Bournemouth Commissioners v. Watts* (1884), 14 Q. B. D. 87; *Melliss v. Shirley L. B.* (1885), 16 Q. B. D. 446. The provision in sub-s. (2) of s. 174, that every contract made by an urban authority whereof the value or amount exceeds 50*l.* "shall specify some pecuniary penalty to be fixed in case the terms of the contract are not duly performed," is obligatory, and not merely directory; and if such penalty is not specified an action on the contract against an urban authority cannot be maintained. *British Insulated Wire Co. v. Prescott U. D. C.*, [1895] 2 Q. B. 463, 588. As to retainer of a solicitor to attend a local inquiry held by the Local Government Board and afterwards oppose a Bill in Parliament to confirm a provisional order, see *Brooks v. Mayor of Torquay and Newton Abbot R. D. C.*, [1902] 1 K. B. 601.

It is provided by the Telegraph Act, 1892 (55 & 56 Vict. c. 59), s. 6, that "(1) Any company or person authorised to lay an electric line within the meaning of the Electric Lighting Act, 1882, may, with the approval of the Board of Trade, and with the consent of the local authority as defined by the Electric Lighting Act, 1882, for the district within which such electric line is laid, and by agreement with the Postmaster-General, or, if so authorised by the Postmaster-General, with his licensee, place, or authorise the Postmaster-General or his licensee to place, telegraphs in the trenches, tubes, pipes, or apparatus used for the purpose of such electric line.

Agreement  
by Post-  
master  
General with  
electric  
lighting  
company.  
45 & 46 Vict.  
c. 56.

"(2.) The enactments relating to the company or person in relation to the powers, operations, trenches, tubes, pipes, and apparatus of such company or person for the purpose of the electric line shall, so far as applicable, extend to the said telegraphs, and to anything done in pursuance of this section."

By ss. 33—42 of the City of London Sewers Act, 1848, the Commissioners of Sewers (whose statutory powers were afterwards vested in the Mayor and Corporation of the City of London) were empowered, under certain conditions and safeguards, to enter into contracts for the execution of works authorised by the Act, or for the supply of materials or labour, "or for any other matters or things whatsoever necessary for enabling them to carry the purposes of the Act into effect," and, in particular, s. 42 enacted that "no person, being a Commissioner, or a member of the Court of Aldermen or of the Common Council of the City, shall be directly or indirectly interested or concerned in any contract which shall be made or entered into, by or on behalf of the Commissioners for the execution of any works by this Act directed or authorised to be done or executed, or for furnishing materials or labour, or for any other matter or thing whatsoever upon pain that every such contract shall be null and void," and that the Commissioners, etc., so interested or concerned should for every such offence forfeit 100*l.* By s. 116 the Commissioners were empowered to enter into contracts with gas companies and other persons to supply gas, "or to light the City by any other

Members of  
corporation  
"directly or  
indirectly  
interested or  
concerned in"  
contract.

**Sect. 10.****NOTE.**

mode." The Commissioners subsequently entered into three electric lighting contracts, two of them being with the Brush Company, and one with a syndicate. At the date of the contracts, some of the Commissioners, Aldermen, and Common Councilmen, were shareholders in the Brush Company, but not in the syndicate. Shortly afterwards the company and syndicate assigned their contracts to the plaintiffs, another electric lighting company, whose shareholders included several Commissioners, Aldermen, and Common Councillors. *Held* by the Court of Appeal—(1) that s. 42 applied to every kind of contract under the Act, including any lighting contract under s. 116, and was not restricted to construction contracts under the sections preceding s. 42; and (2) that consequently s. 42 rendered the two contracts with the Brush Company null and void, *ab initio*, by reason of their being Commissioners, etc., "interested" therein as shareholders of the company at the date of the contracts, but that the contract with the syndicate was good in its inception through there being no Commissioner, etc., interested therein at the date thereof, and that its subsequent assignment to the plaintiff company, though that company included Commissioners, etc., among its shareholders, did not constitute such a novation of the contract as to render it null and void within the section. *City of London E. L. Co. v. Mayor of London*, [1901] 1 Ch. 602.

**Stamp Duty.**

As to stamp duty on an instrument whereby a supply of electric energy was to be afforded at a certain yearly payment and which embraced other separate and distinct matters, see *British Electric Traction Co. v. Commissioners of Inland Revenue*, [1902] 1 K. B. 441, decided under the Stamp Act, 1891 (55 & 56 Vict. c. 39, s. 4).

**Sardinia  
Street Case.  
L. C. C. to  
erect another  
generating  
station.**

By the London County Council (Improvements) Act, 1899 (62 & 63 Vict. c. cclxvi.), the London County Council were authorised to construct a new street from Holborn to the Strand with certain widenings, and to take compulsorily, land, etc., for that purpose. The Metropolitan Electric Supply Co., Limited, had been authorised by Parliament to establish an electric generating station in Sardinia Street. On that site they generated electricity which was distributed over their area of supply. They had also been authorised to erect at Willesden a large generating station, from which electric energy would be conducted at high voltage, and would be transformed before distribution throughout their area of supply. The London County Council's Act of 1899 contained a clause (55) providing for the reinstatement of the company so far as regards the Sardinia Street site. The clause in effect provided that the Council shall not enter upon, take, or use any part of the existing site until two years after they shall have provided at their own expense, and vested in the company, another site cleared for building, and available for the erection of a generating station; that the company should, "on the site so provided, erect, maintain, work and use a station for generating, transforming, transmitting and conveying electrical energy with dynamos, batteries, accumulators, engines, plant, machinery and appliances, and to generate, transform, and transmit such energy accordingly." The clause further provided that the Council should pay to the company "a sum equal to the costs and expenses of erecting and fitting up a new generating station upon the new site with new plant of a capacity to generate and supply electric energy to an output of not less than 4,000 kilowatts." The clause also provided for arbitration. An arbitration had been entered upon between the parties. Pending that arbitration an

action was brought in the Chancery Division by the London County Council to determine, for the guidance of the arbitrator, upon what principle the compensation should be assessed by the arbitrator under the section aforesaid. It appeared that the company desired to build a larger station than the old one at Sardinia Street for transforming and transmitting electrical energy. On the part of the company evidence was given that in order to provide for the generating and supply of electrical energy to an output of not less than 4,000 kilowatts it was necessary to provide plant to provide for 6,000 kilowatts, so that in case of breakdown or of necessity to repair the place of some part of the plant may be taken by some other part of the plant. MR. JUSTICE FARWELL decided against this view. *London C. C. v. Metropolitan E. S. Co., Limited* (*Electrician*, April 26, 1901, p. 27). On appeal, the Court of Appeal overruled this decision (*Electrician*, May 10, 1901, p. 109). The House of Lords restored the decision of Mr. Justice Farwell (*Times*, March 11, 1902; *Electrician*, March 14, 1902, p. 881).

**Sect. 10.**

NOTE.

11. Any local authority who have obtained a license, order, or special Act for the supply of electricity, may contract with any company or person for the execution and maintenance of any works needed for the purposes of such supply, or for the supply of electricity within any area mentioned in such license, order, or special Act, or in any part of such area; but no local authority, company, or person shall by any contract or assignment transfer to any other company or person or divest themselves of any legal powers given to them, or any legal liabilities imposed on them by this Act, or by any license, order, or special Act, without the consent of the Board of Trade.

Power for local authority to contract in certain cases and restrictions on assignments of powers, etc., of undertakers.

This section is excluded from incorporation by some of the Power Acts. See more fully the chapter on those Acts, *post*.

It is not the practice of Parliament to make parliamentary powers assignable. In the case, however, of electric lighting orders, Parliament has specially provided for the purchase by a local authority from a company or person (see s. 2 of the Electric Lighting Act, 1888, superseding s. 27 of the Act of 1882). It was formerly the practice of the Board of Trade to insert in provisional orders in favour of local authorities a clause authorising a transfer, with the consent of the Board of Trade, of the powers, duties, liabilities and works from the local authority to a company or person. The policy of the Board of Trade in this respect has undergone a change. No such clause is now inserted, unless for good cause shown, and no enactment to that effect occurs in the Electric Lighting (Clauses) Act, 1899.

See the following instances of such transfers being authorised by Provisional Orders in 1902, viz.: Saddleworth and Springhead (respectively confirmed by 2 Edw. 7, ch. lxxviii.); Hindhead and Paignton (respectively confirmed by 2 Edw. 7, ch. lxxix.); Blaydon (confirmed by 2 Edw. 7, ch. clxxxvii.); and Slough (confirmed by 2 Edw. 7, ch. ccvi.).

In 1899 the Walker Urban District Council obtained a provisional order for supplying electricity within their district. By the Newcastle-upon-Tyne Electric Supply Company's Act, 1900 (63 & 64 Vict. ch. ccxi.), s. 14, the

**Sect. 11.****NOTE.**

company and the Walker Urban District Council were, with the approval of the Board of Trade, authorised to carry into effect any agreement for the transfer of the undertaking, etc., of the Council. By s. 15 the company were authorised to contract with the Council for the execution and maintenance of any works needed for the supply of energy within the Walker Urban District.

The annual reports to Parliament by the Board of Trade, under s. 80, contain a list of all transfers approved by the Board since the then preceding report. See, *e.g.*, Parly. Paper No. 280 of 1902.

In the House of Commons, on July 12, 1900, Mr. LOUGH asked the President of the Board of Trade "whether he would explain why the Board of Trade insist on all transfers of electric lighting orders to companies being in a standard form, and refuse to allow variations required by local conditions, also on what grounds they refuse to allow the insertion of agreed provisions for the reduction of the maximum price either for public or private lighting; and whether he would consider the desirability of relaxing these departmental rules." Mr. RITCHIE replied: "The Board of Trade do not consider that deeds of transfer under electric lighting orders should contain any provisions other than those which are consequential on the substitution of a company for a local authority as undertakers. To go beyond this is to provide, under the colour of a mere deed of transfer, for matters which really require the approval of Parliament. Transferees are accordingly placed in exactly the same position with regard to price as they would have been had they obtained the order originally. The price for public supply is left to agreement, or, failing agreement, to arbitration. The price for private supply is not specifically fixed, but is left (as in the order) subject to a maximum which may be revised periodically by the Board of Trade on the representation of the local authority. I see no reason for altering the existing practice of the department."

Incorporation  
of certain  
provisions of  
Clauses  
Consolidation  
Acts.

**12.** The provisions of the following Acts shall be incorporated with this Act; that is to say,

(1.) The Lands Clauses Acts, except the enactments with respect to the purchase and taking of lands otherwise than by agreement, and except the enactments with respect to the entry upon lands by the promoters of the undertaking (a); and

10 & 11 Vict.  
c. 15.

(2.) The provisions of the Gasworks Clauses Act, 1847, with respect to breaking up streets for the purpose of laying pipes, and with respect to waste or misuse of the gas or injury to the pipes and other works, except so much thereof as relates to the use of any burner other than such as has been provided or approved of by the undertakers; and (b)

34 & 35 Vict.  
c. 41.

(8.) Sections thirty-eight to forty-two inclusive, and sections forty-five and forty-six, of the Gasworks Clauses Act, 1871.



For the purposes of this Act, in the construction of all the enactments incorporated by this section, "the special Act" means this Act inclusive of any license, order, or special Act; and the "promoters" or "undertakers," and "the undertaking," as the case may be, mean the undertakers and the undertaking respectively under this Act.

Sect. 12.

In the construction of the said Lands Clauses Acts, "land" includes easements in or relating to lands.

In the construction of the said Gasworks Clauses Act, 1847, and the Gasworks Clauses Act, 1871, the said Acts shall be construed as if "gas" meant "electricity," and as if "pipe" meant "electric line" (c), and "works" meant "works" (c) as defined by this Act, and as if "the limits of the special Act" meant the area within which the undertakers are authorised to supply electricity under any license, order, or special Act.

All offences, forfeitures, penalties, and damages under the said incorporated provisions of the said Acts or any of them may be prosecuted and may be recovered in manner by the said Acts respectively enacted in relation thereto, provided that sums recoverable under the provisions of section forty of the Gasworks Clauses Act, 1871, shall not be recovered as penalties, but may be recovered summarily as civil debts (d).

The Electric Lighting (Clauses) Act, 1899, embodies by way of appendix the above section, and also the whole of the incorporated sections. For the latter and notes thereto see *post*, pp. 211 *et seq.*

(a) In exempting the portions of the Lands Clauses Acts above mentioned the Electric Lighting Act, 1882, follows the precedent of the Gas and Water Works Facilities Act, 1870 (33 & 34 Vict. c. 70); but there is this notable distinction, that the section in the text provides that, "In the construction of the said Lands Clauses Acts, 'land' includes easements in or relating to lands." The sections "with respect to the entry upon lands by the promoters" are necessarily excepted, because compulsory purchase is excepted, and these sections are ancillary to compulsory purchase. In regard to the question of compulsory purchase of land see further, *ante*, pp. 18 and 61—70.

Lands Clauses Acts.

"Land" here includes easements.

(b) Among the sections of the Gasworks Clauses Act, 1847, thus incorporated with the Act of 1882, are those with respect to the breaking up of streets for the purpose of laying pipes. Of these s. 7 provides that nothing therein contained "shall authorise or empower the undertakers to lay down or place any pipe or other works into, through, or against any building or in any land not dedicated to public use, without the consent of the owners and occupiers thereof." See more fully the notes to that section at p. 223.

**Sect. 12.**

**NOTE.**  
Recovery of  
penalties, etc.

(c) For definition of "electric line" and of "works" see s. 82, p. 188).

(d) The Gasworks Clauses Act, 1847, s. 40, enacts that if the gasworks be in England or Ireland, the clauses of the Railways Clauses Consolidation Act, 1845, with respect to the recovery of damages not specially provided for and of penalties, and to the determination of any other matter referred to justices, shall be incorporated with that and the special Act; and if the gasworks be in Scotland, the clauses of the Railways Clauses Consolidation (Scotland) Act, 1845, with respect to the recovery of damages not specially provided for, and to the determination of any other matter referred to the sheriff or to justices, shall be incorporated with that and the special Act; and such clauses shall apply to the gasworks and to the undertaking, and shall be construed as if the word "undertakers" had been inserted therein instead of the word "company." In the case of the Railways Clauses Consolidation Act, 1845, the sections thus incorporated are ss. 140—160. These in effect provide for summary recovery before justices with appeal to quarter sessions. As regards the recovery of "damages, costs, or expenses," the procedure thus provided remains. As regards the recovery of penalties, many of the above sections have been repealed as regards England by the Summary Jurisdiction Act, 1884 (47 & 48 Vict. c. 48), which substitutes the provisions of the Summary Jurisdiction Act, 1848 (11 & 12 Vict. c. 48), as amended by the Summary Jurisdiction Act, 1879 (42 & 43 Vict. c. 49). Section 76 of the schedule to the Electric Lighting (Clauses) Act, 1899, provides that, "All penalties, fees, expenses, and other moneys recoverable under the Special Order, or under the Board of Trade regulations, the recovery of which is not otherwise specially provided for, may be recovered summarily in manner provided by the Summary Jurisdiction Acts." See p. 207.

As regards money due for gas or meter rent, or any expenses lawfully incurred in cutting off gas, this under s. 40 of the Gasworks Clauses Act, 1871, is recoverable as a penalty; but the effect of the concluding part of s. 12 of the Electric Lighting Act, 1882, is to make money due for energy or meter rent, or expenses of cutting off, recoverable "summarily as civil debts" and not as a penalty. As to this, see p. 229, and ss. 6 and 85 of the Summary Jurisdiction Act, 1879.

Restriction  
on breaking  
up of private  
streets,  
railways, and  
tramways.

**13.** Nothing in this Act or in any Act incorporated therewith shall authorise or empower the undertakers to break up any street which is not repairable by such local authority, or any railway or tramway, without the consent of the authority, company, or person by whom such street, railway, or tramway is repairable, unless in pursuance of special powers in that behalf inserted in the license, order, or special Act, or with the written consent of the Board of Trade, and the Board of Trade shall not in any case insert any such special powers in any license or provisional order, or give any such consent until notice has been given to such authority, company, or person by advertisement or otherwise, as the Board of Trade may direct, and an opportunity has been given to such authority, company, or person to state any objections they may have thereto.

"Street" is defined by s. 32 (*post*, p. 138) to include "any square, court or alley, highway, lane, road, thoroughfare, or public passage or place within the area in which the undertakers are authorised to supply electricity by this Act or any license, order, or special Act."

Sect. 14.

NOTES

s.

See also s. 12 of the schedule to the Electric Lighting (Clauses) Act, 1899. In the case of County of London companies to which the Act of 1899 does not apply, a corresponding enactment will be found in their provisional orders.

See s. 7 of the Gasworks Clauses Act, 1847, and notes thereto (p. 223), and see further, s. 15 *et seq.*, of the schedule to the Electric Lighting (Clauses) Act, 1899, *post*, p. 170.

Most of the Acts authorising the supply of electric power contain the following section :—

"The provisions of s. 13 of the Electric Lighting Act, 1882, and of s. 12 of the schedule to the Electric Lighting (Clauses) Act, 1899, restricting the breaking up of tramways or railways where laid across or along any highway on the level or the roadway of or approaches to any bridge over any railway within the area of supply, shall not apply to the Company."

See the chapter on POWER ACTS, *post*.

Rule xii. of the rules made by the Board of Trade (*post*, p. 289) provides that "Where the undertakers under any licence, order or special Act, desire the written consent of the Board of Trade under s. 13 of the Electric Lighting Act, 1882, to enable them to break up any street not repairable by a local authority or any railway or tramway which they are not empowered to break up under such licence, order, or special Act, application for such consent must be made by memorial, and the memorial must specially request such consent, and must describe accurately the street, railway, or tramway which they propose to acquire power to break up." See s. 21 (3) of the schedule to the Electric Lighting (Clauses) Act, 1899, p. 181.

Provisional orders frequently contain power to the following effect :—"Subject to the provisions incorporated with this order, the undertakers are specially authorised by this Order to break up the railways and tramways which are mentioned in the second schedule to this Order." Similar powers are also usually given to break up scheduled streets, etc., not repairable by the local authority.

**14.** Notwithstanding anything in this Act or in any Act incorporated therewith, the undertakers shall not be authorised to place any electric light above ground, along, over, or across any street, without the express consent of the local authority, and the local authority may require the undertakers to forthwith remove any electric line placed by them contrary to the provisions of this section, or may themselves remove the same, and recover the expenses of such removal from the undertakers in a summary manner; and where any electric line has been placed above ground by the undertakers in any position, a court of summary

Restrictions  
as to above-  
ground works.

**Sect. 14.**Rec  
per

jurisdiction, upon complaint made, if they are of opinion that such electric line is or is likely to become dangerous to the public safety, may, notwithstanding any such consent as aforesaid, make an order directing and authorising the removal of such electric line by such person and upon such terms as they may think fit.

urther  
nactment in  
ct of 1899.

As a further security against above-ground wires, it is provided by s. 10 (b) of the schedule to the Electric Lighting (Clauses) Act, 1899, that "The undertakers shall not, without the express consent of the Board of Trade, and, where the local authority are not themselves the undertakers of the local authority also, place any electric line above ground except within premises in the sole occupation or control of the undertakers, and except so much of any service line as is necessarily so placed for the purpose of supply." See p. 168.

*The Wandsworth case.*

The section in the text requires the consent of the local authority to above-ground works. The Act of 1899 requires the further consent of the Board of Trade. See p. 168. In County of London Orders the consent of the County Council is required. The authority having been obtained, such works will be subject to the regulations prescribed by the Board of Trade in reference to aerial lines (regulations, 16—26). The above section also provides for the removal of any electric line placed contrary to the provisions of the section, and furthermore, authorises a court of summary jurisdiction upon complaint made, if they are of opinion that such electric line is, or is likely to become, dangerous to the public safety, to make an order for the removal thereof, notwithstanding any consent of the local authority. These provisions remove (so far as regards electric lines under the authority of the Electric Lighting Acts) some inconveniences which resulted from the decision in *Wandsworth District B. of W. v. United Telephone Co., Limited* (1884), 18 Q. B. D. 904. In that case the telephone company had placed wires fixed to the chimneys of certain houses, and therefore, above the level of the roof of the houses, and passed them diagonally across a street, the owners of the houses making no objection. If the wires had been a nuisance to the highway, *e.g.*, if they had been dangerous to the use of the street, the court held that the Board of Works might have obtained an injunction; but it was found as a fact at the trial that there was no danger and no nuisance. In these circumstances, the case turned entirely upon the clause of the Metropolis Management Act, 1855, s. 96, vesting "streets" in the Board of Works. The court held (following *Coverdale v. Charlton* (1878), 4 Q. B. D. 104) that the word "street" included a depth below the surface sufficient for ordinary user as a street, and a height above the surface sufficient for the ordinary user of the street as a street (such as, *e.g.*, the passage of a fire-escape), but they further held that in this particular case the wires in question were so high above the surface of the road that they did not interfere with the use of the street as a street. On that ground an injunction was refused. Since the decision in the above case, the London Overhead Wires Act, 1891, has been passed. Cf. *National Telephone Co. v. Constables of St. Peter Port*, [1900] A. C. 317, cited *post*, p. 214, and *Finchley E. L. Co. v. Finchley U. D. C.*, [1902] 1 Ch. 866, cited *post*, p. 217. See further chapter on COUNTY OF LONDON, *post*, p. 303.

Some of the Power Acts enact that the consent of the local authority (being a rural district council) shall not be unreasonably withheld, and give an appeal to the Board of Trade: Cleveland and Durham County Electric Power Act, 1901, s. 44; Yorkshire Electric Power Act, 1901, s. 45; County of Durham Electric Power Supply Act, 1900, s. 16; Derbyshire and Nottinghamshire Electric Power Act, 1901, s. 39. All the Acts of 1902 contain the enactment.

Sect. 14.

NOTE.

Power Acts.

In the case of *Levy v. National Telephone Co., Limited*, it appeared that the plaintiff occupied a house in London, and that the defendants, who carried on their business under a licence from the Postmaster-General, carried their wires over his house, without touching the house, and without any post or standard being fixed upon the roof. It was stated that about 150 separate wires, and three cables containing 100 wires, were so carried over the plaintiff's house. The plaintiff brought an action for damages for trespass and also for an injunction for the removal of the wires. The defendant company, in resisting an application for interim injunction, urged that some of the wires had been over the house in question for thirteen years and that the plaintiff had only been in occupation of it for a short time; and that there was no danger to the plaintiff's house in allowing the wires to remain until the trial. DAY, J., granted an interim injunction directing the defendants within two months to remove their wires. On appeal this decision was affirmed by the Court of Appeal. See *Times*, December 18th, 1897.

Action by  
householders.

Action for trespass against a telephone company who were said to have no less than 546 wires on strands or cables passing over plaintiffs' house. At the back of the house were two large poles which were put into the ground to the depth of over six feet, one pole having been put there fourteen years ago, and the other seven years ago. The poles were in the one case twelve inches and in the other forty inches from the back wall of the house. The poles were liable to oscillation at times, and thus it was alleged a rent had been caused in the back wall. The plaintiffs alleged that they had, until lately, been under the impression that the poles and wires had been placed under Parliamentary authority. Verdict for plaintiffs, owner 45*l.* and occupier 5*l.* *Cristofer v. National Telephone Co., Limited (Electrician)*, December 9th, 1898, p. 240).

In cases where undertakers prior to applying for a licence or order have commenced work, and stretched wires along or across streets or placed above-ground works, it has been the practice of the Board of Trade to insert in any provisional order they grant, a requirement that such above-ground works shall be removed.

Enactments  
as to over-  
head wires  
without  
authority.

A note to the new form of provisional order (*post*, p. 281) provides that "Where an order is granted to a company or person having overhead wires already installed, a clause will be inserted for their removal, except in special circumstances."

See s. 4 of the Electric Lighting Act, 1888, which authorises the Board of Trade to make regulations applicable to the case of electric lines or works existing otherwise than under and subject to the provisions of a licence, order, or special Act, *post*, p. 147.

Over and above the powers placed in the hands of local authorities by s. 14 in the text, the Acts of several municipal corporations give them powers in connection with above-ground wires, and these will enable them

**Sect. 14.****NOTE.**

Restrictions  
as to above-  
ground wires.

to deal with unauthorised undertakers having overhead wires. The following section is taken from the Southport Corporation Act, 1900 (68 & 64 Vict. ch. cclxxxi.), s. 54.

- (1) From and after the passing of this Act no person shall place any electric line above ground along, over, or across any street, without the express consent of the Corporation, and the Corporation may require any person who shall so place any electric line to forthwith remove the same, or may themselves remove the same and recover the expenses of such removal from such person in a summary manner.
- (2) Where any electric line has been placed above ground by any person in any position, a court of summary jurisdiction upon complaint made, if they are of opinion that such electric line is, or is likely to become, dangerous to the public safety, may, notwithstanding any such consent as aforesaid, make an order directing and authorising the removal of such electric line by such person and upon such terms as they may think fit.
- (8) The expression "electric line" in this section shall not include any electric line belonging to or used for telegraphic or telephonic purposes by the Postmaster-General or any licensee of the Postmaster-General, provided that nothing herein contained shall be deemed to prejudice or affect any rights, powers, or privileges of the Postmaster-General under the Telegraph Acts, 1863 to 1899.

Nothing in this section shall extend to or include any electric line belonging to any railway company or used by them in connexion with their business, and which now is or hereafter shall be fixed or placed by any such company across, over, or along any railway, provided such apparatus do not project or be not stretched or placed beyond such railway over any street, or be not stretched or placed over any street crossing over such railway other than the part of any street crossing any railway on the level.

There are other such precedents. The Manchester Corporation Act, 1882 (45 and 46 Vict. ch. cciii.), contains the following section:—

Restrictions  
on placing  
wires, etc.,  
other than  
telegraph  
wires, etc.,  
over, under,  
across, or  
along streets  
or roads.

47. It shall not be lawful for any person to fix or place any rope, line, cord, post, wire, tube, or other apparatus (other than posts, wires, tubes, or other apparatus for telegraphic or telephonic purposes), over, under, across, or along any street or road, without the consent of the Corporation, which consent shall be in writing under the hand of the town clerk, and may contain such terms and conditions as the Corporation think fit. Provided that nothing in this section shall extend to any posts, wires, tubes, or other property of Her Majesty's Postmaster-General.

See also Darwen Corporation Act (62 & 63 Vict. ch. ccxiv.), s. 94, and Blackburn Corporation Act, 1901 (1 Edw. 7, ch. ccxxiii.), s. 122.

In Felixstowe, a company without statutory powers had been distributing electricity by means of overhead wires. Afterwards the local authority obtained a provisional order under the Electric Lighting Acts, containing the usual restriction on overhead wires imposed on statutory undertakers. In the Session of 1902 the local authority had a Bill in Parliament in which they had inserted a clause similar in effect to that in the Southport Act.

On the opposition of the non-statutory company, a Committee of the House of Lords (LORD GLANUSK, Chairman) struck out the clause.

**Sect. 14.****NOTE.**

As to the County of London, see London Overhead Wires Act, 1891, *post*, p. 325.

The Public Health Acts Amendment Act, 1890 (53 & 54 Vict. c. 59), an adoptive Act, authorises urban authorities to from time to time make, alter and repeal byelaws for prevention of danger or obstruction to the public from posts, wires, etc., along or across any street (ss. 18 and 14); but s. 15 provides, *inter alia*, that the Act shall not "extend to any works of any undertakers within the meaning of the Electric Lighting Acts, 1882 to 1888, to which the provisions of those Acts apply." See form of byelaws, *post*, p. 271.

"Electric line" is defined by s. 32 to mean "a wire or wires, conductor, or other means used for the purpose of conveying, transmitting, or distributing electricity with any casing, coating, covering, tube, pipe, or insulator enclosing, surrounding, or supporting the same, or any part thereof, or any apparatus connected therewith for the purpose of conveying, transmitting, or distributing electricity or electric currents." See p. 138. Electric line.

As to the procedure when a court of summary jurisdiction is applied to for the removal of above-ground lines, see the Summary Jurisdiction Act, 1879 (42 & 43 Vict. c. 49), which provides (s. 34), "(1.) Where a power is given by any future Act to a court of summary jurisdiction of requiring any person to do or abstain from doing any act or thing other than the payment of money, or of requiring any act or thing to be done or left undone other than the payment of money, and no mode is prescribed of enforcing such requisition, the court may exercise such power by an order or orders, and may annex to any such order any conditions as to time or mode of action which the court may think just, and may suspend or rescind any such order on such undertaking being given or condition being performed as the court may think just, and generally may make such arrangement for carrying into effect such power as to the court seems meet. Application to court of summary jurisdiction.

"(2.) A person making default in complying with an order of a court of summary jurisdiction in relation to any matter arising under any future Act other than the payment of money, shall be punished in the prescribed manner, or if no punishment is prescribed, may in the discretion of the court be ordered to pay a sum (to be enforced as a civil debt recoverable summarily under this Act) not exceeding one pound for every day during which he is in default, or to be imprisoned until he has remedied his default:

"Provided that a person shall not, for non-compliance with the requisition of a court of summary jurisdiction, whether made by one or more orders, to do or abstain from doing any act or thing, be liable under this section to imprisonment for a period or periods amounting in the aggregate to more than two months, or to the payment of any sums exceeding in the aggregate twenty pounds."

15. Subject to the provisions of this Act and of the license, order, or special Act authorising them to supply electricity, and to any byelaws made under this Act, the undertakers may alter the position of any pipes or wires being under any street or place Power to undertakers to alter position of pipes and wires.

E.L.

I

**Sect. 15.** authorised to be broken up by them which may interfere with the exercise of their powers under this Act, on previously making or securing such compensation to the owners of such pipes or wires, and on complying with such conditions as to the mode of making such alterations as may before the commencement of such alterations be agreed upon between the undertakers and owners, or in case of difference as may be determined in manner prescribed by the license or provisional order authorising the undertakers to supply electricity, or where no such manner is prescribed as may be determined by arbitration, and any local or other public authority, company, or person may in like manner alter the position of any electric lines or works of the undertakers, being under any such street or place as aforesaid, which may interfere with the lawful exercise of any powers vested in such local or other public authority, company, or person in relation to such street or place, subject to the like provisions, conditions, and restrictions as are in this section contained with reference to the alteration of the position of any pipes or wires by the undertakers.

See further, s. 17 of the schedule to the Electric Lighting (Clauses) Act, 1899, *post*, p. 174, which contains elaborate provisions defining the conditions under which the undertakers may alter the position of any pipes (not forming part of any sewer of the local authority) or any wires being under any street or place authorised to be broken up by them which may interfere with the exercise of their powers under the principal Act or their provisional order.

In orders of the Light Railway Commissioners made under the Light Railways Act, 1896, a clause is inserted making provision regarding the alteration of the position of the pipes, etc., of gas or water companies, etc. The clause contains this provision: "Nothing in this section shall apply in the case of any electric lines or works of any undertakers the position of which may be altered under s. 15 of the Electric Lighting Act, 1882."

Clause for  
protection of  
canals.

**16.** If at any time after the undertakers have placed any works under, in, upon, over, along or across any canal, any person having power to construct docks, basins or other works upon any land adjoining to or near such canal, constructs any dock, basin or work on such land, but is prevented by the works of the undertakers from forming a communication for the convenient passage of vessels with or without masts between such dock, basin or other work, and such canal; or if the business of such dock, basin or other work is interfered with by reason or in consequence of any such works of the undertakers, then the undertakers at the request of such person, and on having reasonable facilities afforded them by him for placing works round



such dock, basin or other work, under, in, upon, over, along or across land belonging to or under his control, shall remove and place their work accordingly. If any dispute arises between the undertakers and such person as to the facilities to be afforded to the undertakers, or as to the direction in which the works are to be placed, it shall be determined by arbitration.

Sect. 16.

By Rule XI. (4), a list of the canals and navigable rivers (if any) within the proposed area of supply must be deposited at the Board of Trade along with the memorial for the provisional order. See p. 238.

The above section protects the interests not only of the canal but also of any person having power to construct docks, basins, or other works upon any land adjoining to or near the canal.

See further, as to the protection of railway and canal companies, s. 19 of the schedule to the Electric Lighting (Clauses) Act, 1899, *post*, p. 179.

17. In the exercise of the powers in relation to the execution of works given them under this Act, or any license, order, or special Act, the undertakers shall cause as little detriment and inconvenience and do as little damage as may be, and shall make full compensation to all bodies and persons interested for all damage sustained by them by reason or in consequence of the exercise of such powers, the amount and application of such compensation in case of difference to be determined by arbitration.

Compensation for damage.

As to what is included in "works," see s. 32, *post*, p. 183, and the notes to s. 10, *ante*, p. 101.

The arbitrator under this section is appointed by the Board of Trade. See s. 28, p. 180.

The provisions of this section relating to compensation refer to payment of compensation for damages caused by the execution of the works required to supply electricity and not to damages caused by their user when constructed. *Shelfer v. City of London E. L. Co.*; and *Meux's Brewery Co. v. Same*, [1895] 1 Ch. 287. See p. 102.

As to the meaning of the words "do as little damage as may be," see *R. v. East and West India Docks* (1853), 2 E. & B. 466; and *Fenwick v. East London Rail. Co.* (1875), L. R. 20 Eq. 544.

See also the provision for compensation contained in s. 6 of the Gasworks Clauses Act, 1847, *post*, p. 212.

18. The undertakers shall not be entitled to prescribe any special form of lamp or burner to be used by any company or person, or in any way to control or interfere with the manner in which electricity supplied by them under this Act, and any license, order, or special Act is used: Provided always that no local authority, company, or person shall be at liberty to use any

Undertakers not to prescribe special form of lamp or burner.

**Sect. 18.** — form of lamp or burner or to use the electricity supplied to them for any purposes, or to deal with it in any manner so as to unduly or improperly interfere with the supply of electricity supplied to any other local authority, company, or person by the undertakers, and if any dispute or difference arises between the undertakers, and any local authority, company, or person entitled to be supplied with electricity under this Act, or any license, order, or special Act, as to the matters aforesaid, such dispute or difference shall be determined by arbitration.

Some of the Power Acts exclude this section from incorporation "so far as it relates to lamps or burners." See further the Chapter on POWER ACTS, *post*.

The difficulties which may have been anticipated, and which were intended to be met by the proviso in this section, have not arisen in practice; and it is believed that no arbitration has been held under it. See s. 27 (4) of the schedule to the Electric Lighting (Clauses) Act, 1899, p. 186.

Obligation on undertakers to supply electricity.

**19.** Where a supply of electricity is provided in any part of an area for private purposes, then except in so far as is otherwise provided by the terms of the license, order, or special Act authorising such supply, every company or person within that part of the area shall, on application, be entitled to a supply on the same terms on which any other company or person in such part of the area is entitled under similar circumstances to a corresponding supply.

Some of the Power Acts exclude this section from incorporation and substitute special provisions. See more fully the Chapter on POWER ACTS, *post*.

Mere demand will not entitle an intending consumer to be supplied with electric energy. The Electric Lighting (Clauses) Act, 1899, and provisional orders to which that Act is not applicable, contain the conditions which have to be observed by any owner or occupier requiring a supply of energy. After serving a notice specifying the premises, the maximum power required, and the day upon which the supply is required to commence, the intending consumer must enter into a written contract, if required by the undertakers, to receive and pay for a supply of energy for a period of at least two years, of such an amount that the payments to be made for the supply at the rate of charge for the time being charged by the undertakers for a supply of energy to ordinary consumers within the area of supply shall not be less than 20 per cent. per annum on the outlay incurred by the undertakers in providing any electrical lines required to be provided for the purposes of the supply; and if required by the undertakers, the consumer must also give security. *Metropolitan E. S. Co., Limited v. Ginder*, [1901] 2 Ch. 799. See s. 27 of the schedule to the Electric Lighting (Clauses) Act, 1899, *post*, p. 185. It is the practice of companies and local authorities supplying electricity to require intending consumers to enter into a contract. See also *Husey v. London E. S. Corp.*, [1902] 1 Ch. 411, cited under s. 20.

See further the notes to s. 20.

20. The undertakers shall not, in making any agreements for a supply of electricity, show any undue preference to any local authority, company, or person, but, save as aforesaid, they may make such charges for the supply of electricity, as may be agreed upon, not exceeding the limits of price imposed by or in pursuance of the license, order, or special Act authorising them to supply electricity.

Sect. 20.

Charges for electricity.

See the preceding section and notes thereto.

Provisional orders have usually provided that the undertakers may charge for energy supplied by them to any ordinary consumer (otherwise than by agreement),

- (1.) By the actual amount of energy so supplied ; or
- (2.) By the electrical quantity contained in such supply ; or
- (3.) By such other method as may for the time being be approved by the Board of Trade.

An enactment to this effect is contained in s. 81 of the schedule to the Electric Lighting (Clauses) Act, 1899.

The maximum prices chargeable fixed by the provisional order have, as a general rule, been as follows :—

- (1.) Where the undertakers charge any consumer by the actual amount of energy supplied to him, they shall be entitled to charge him at the following rates per quarter : For any amount up to 20 units, 18s. 4d. ; and for each unit over 20 units, 8d.
- (2.) Where the undertakers charge any consumer by the electrical quantity contained in the supply given to him they shall be entitled to charge him according to the rates set forth above, the amount of energy supplied to him being taken to be the product of such electrical quantity and the declared pressure at the consumer's terminals, that is to say, such a constant pressure at those terminals as may be declared by the undertakers under any regulations made under the provisional order. See Regulations B. (6), *post*, p. 255.
- (3.) In the case of a method of charge approved by the Board of Trade, such price as the Board of Trade shall, on approving such method, determine.

See further, *ante*, p. 85. See also ss. 83 and 84 of the schedule to the Electric Lighting (Clauses) Act, 1899, giving power to make other charges by agreement and making provision as to the price to be paid for supply to public lamps, which, in the absence of agreement, is to be determined by arbitration.

An intending consumer signed a form of request to an electric lighting company, subject to, *inter alia*, the following terms : (1) The consumer agrees to take the whole of the electric current required for the premises mentioned below from the company for a period of not less than 5 years. (2) The charge for electric energy to be 4½d. per Board of Trade unit. No quantity was specified ; there was no covenant by the company to supply nor by the defendant to take any energy. Similar forms of request had been signed by other persons for different terms of years and at different prices. The

Cases decided on special contracts.

**Sect. 20.****NOTE.**

Cases decided  
on special  
contracts—  
*contd.*

company afterwards supplied another consumer under contract for two years at 4d. per unit; but he was a large consumer and took his supply in the daytime, which was an advantage to the company. It was held that this did not amount to undue preference under ss. 19 and 20 of the Act of 1882; that the phrase "special circumstances" in s. 19 embraced amount of energy consumed, the expense of supplying it and getting payment, uniformity of demand and the fact that some consumers required the energy by day and some by night and that unless all the circumstances were similar, agreements might lawfully be made for different terms and at different rates. The contract (the terms of which were embodied in the form of request) contained no negative covenant not to take electric energy from any other source. The consumer having given to the company notice to remove their meter, and that he had agreed to take his light from another electric lighting company, *BUCKLEY, J.*, granted an injunction at the instance of the company, holding that the negative covenant was to be implied. *Metropolitan E. S. Co. v. Ginder*, [1901] 2 Ch. 799. Cf. *Whitwood Chemical Co. v. Hardman*, [1891] 2 Ch. 416.

A limited company owning a large hotel at Westminster obtained a supply of electric current from the London Electric Supply Corporation under an agreement which contained a clause to the effect that the electric company "shall be at liberty to discontinue the supply of energy if and so long as the consumer shall make default in making payment in accordance with the agreement hereinbefore contained," that is by quarterly payments, or if required by the defendants at shorter periods, at the rate specified in the defendants' published scale of charges. In an action by debenture-holders against the hotel company a receiver of the undertaking, property, and assets of the company was appointed, and the company were ordered to deliver over to the receiver "possession of the said premises as far as is necessary for the purposes of the receivership." At this time there was due from the company to the defendants a sum of £437 for electric current supplied by them to the hotel. This amount the receiver refused to pay, and the electric light company threatened to cut off the supply of current. In an action by the receiver for injunction it was held by the Court of Appeal that the electric company were entitled to discontinue the supply of current until the receiver had entered into a new contract with them for a supply. Either the receiver stood in the place of the hotel company under their agreement above referred to, or else he was a new tenant. On either contention the Court held the electric company to be in the right; because in the one case the receiver would be bound by the terms of the agreement which entitle the company to cut off, and in the second case, he was a new tenant who was not entitled to the current as he had not entered into a written contract with the undertakers under s. 47 of their provisional order of 1889, confirmed by 52 & 53 Vict. ch. clxxviii. *Husey v. London E. S. Corporation*, [1902] 1 Ch. 411; cf. *Husey v. Gaslight and Coke Co.* (1902), 18 T. L. R. 299, cited *post*, p. 121.

The lessee of a theatre entered into a contract with an electric lighting company to take a supply for a year certain, it being stipulated that in the event of the theatre being sub-let for any portion of the period, the liability of the sub-tenant should be substituted for that of the lessee. The theatre was sub-let for a period, and notice was duly given to the company. Subsequently, and within the year, a company was formed which became

sub-tenants, but no notice was given to the electric light company of that sub-tenancy. In an action against the lessee for light supplied during the sub-tenancy of the company, judgment was given for the electric light company. *London E. S. Corporation v. Brickwell*, *Times*, February 24th, 1902; *El. Rev.*, February 28th, 1902, p. 836.

**Sect. 20.****NOTE.**

Cases decided on special contracts—*contd.*

The defendant entered into an agreement with the plaintiffs and a wiring company for the installation of his premises. The agreement, *inter alia*, provided that, "(7) The consumer shall until purchase as aforesaid pay quarterly to the Supply Co." (the plaintiffs) "for the use of the installation  $\frac{1}{4}$ d. per Board of Trade unit for every unit of electrical energy supplied to the said premises, and the minimum payment in any year shall be 1s. for each eight-candle power lamp, or its equivalent installed." The agreement further contained a power to the plaintiffs to enter and remove in case the defendant should cease to take a supply of electrical energy or should neglect or refuse to pay for the use of the installation as aforesaid. During the quarter from Midsummer to Michaelmas, 1900, the defendant did not use any electricity supplied by the plaintiffs. On appeal from the County Court the question was whether the defendant was bound to pay, in respect of that quarter, the minimum payment provided for by clause 7, even though he had not in fact used any of the plaintiffs' electricity during the quarter. A Divisional Court held that he was so bound. *London E. S. Corporation v. Priddis* (1901), 18 T. L. R. 64.

The London Electric Supply Corporation entered into an agreement with the defendants and a wiring company, one of the terms of the agreement being that the defendants should pay a minimum weekly rental for the use of the electrical fittings of one penny per light for five years. The defendants becoming dissatisfied with the light supplied, put up gas fittings and used gas light. They then asked the plaintiffs to take away the fittings, and the defendants complied by taking away the meter, but left some sixty lights, which they afterwards removed when they found that the current was not used. An action was brought in the Westminster County Court to recover two years' minimum rental. JUDGE WOODFALL, in giving judgment for the defendant, distinguished this case from that of *Priddis*, *supra*, on the ground that when the company were requested to remove the fittings they might have declined to do so, but they had instead removed the meter and lamps. *London E. S. Corporation v. Greenberg*, *El. Rev.*, August 15th, 1902, p. 258; *Electrician*, August 15th, 1902, p. 685.

An electric lighting company installed the electric light for a customer who signed an agreement to pay ten shillings a quarter for the meter for three years. Afterwards the customer discontinued taking the light, and paid what was due. After the lapse of two quarters the company brought an action for two quarters' rent of the meter. JUDGE EMDEN, at the Lambeth County Court, gave judgment for the plaintiffs without costs. *South London E. S. Corporation v. Gouldsten*, *El. Rev.*, October 10th, 1902, p. 618; *Electrician*, October 10th, 1902, p. 1004.

A contract for the supply of an electric lighting installation for an agreed sum contained the following clause :

"The contractor to be prepared to commence the work immediately upon receiving the order for the same, subject to notice from the engineers, and the whole . . . except the plant to be completed in

**Sect. 20.****NOTE.**

all respects on or before the 28th November, 1898, subject to a penalty of £15 per day, and the plant by the 10th December, subject to a penalty of £3 per day for every day the work remains unfinished, to the satisfaction of the authorities or engineers."

Held, that although the word "penalties" was used, the amounts accrued in consequence of default on the part of the contractor were recoverable as liquidated damages. *Re an Arbitration between White and Arthur* (1901), 84 L. T. 594. Cf. *Elphinstone v. Monkland Iron and Coal Co.* (1886), 11 App. Cas. 882; *Law v. Redditch L. B.*, [1892] 1 Q. B. 127; *Wilson v. Love*, [1896] 1 Q. B. 626; and *Strickland v. Williams*, [1899] 1 Q. B. 882.

**Recovery of charges, etc.**

**21.** If any local authority, company, or person neglect to pay any charge for electricity or any other sum due from them to the undertakers in respect of the supply of electricity to such local authority, company, or person, the undertakers may cut off such supply, and for that purpose may cut or disconnect any electric line or other work through which electricity may be supplied, and may, until such charge or other sum, together with any expenses incurred by the undertakers in cutting off such supply of electricity as aforesaid, are fully paid, but no longer, discontinue the supply of electricity to such local authority, company, or person.

The period at which money for current and meter rent will become due and payable is a matter which is generally provided for by the contracts which intending consumers are required to sign. Thus, for example, a company or local authority supplying electricity may stipulate that they may render their accounts quarterly, monthly, or weekly, and that the sum due shall be payable forthwith.

Among the sections of the Gasworks Clauses Acts incorporated with this Act (and also with the Electric Lighting (Clauses) Act, 1899) is s. 39 of the Act of 1871, which provides that "In case any consumer of gas supplied by the undertakers leaves the premises where such gas has been supplied to him without paying the gas rent or meter rent due from him, the undertakers shall not be entitled to require from the next tenant of such premises the payment of the arrears left unpaid by the former tenant, unless such incoming tenant has undertaken with the former tenant to pay or exonerate him from the payment of such arrears." Under this and under a similar (but not identical) section in the Gas Light and Coke Company's Act, 1872 (s. 18), it has been decided that a manager and receiver of a business of a limited company appointed in an action by debenture-holders did not stand in the position of incoming tenant, but of caretaker for the limited company, and that therefore the company were entitled to cut off the supply unless the arrears were paid. *Paterson v. Gas Light and Coke Co.*, [1896] 2 Ch. 476. A similar decision was given in *In re Smith, Ex parte Mason*, [1898] 1 Q. B. 828.

A limited company were the owners of a large hotel and of various mansions consisting of flats adjoining. All of these were supplied with gas, but the limited company paid directly for the gas for the whole premises. They

issued debentures, and in an action by certain debenture-holders a receiver was appointed and a manager was also appointed and the company were ordered to deliver possession of the premises so far as was necessary for the purposes of the receivership and managership. At this time a sum of 429*l.* 1*s.* 10*d.* was due for arrears of gas supplied. The receiver claimed to be entitled to a supply of gas for the premises without paying the arrears. In an action to restrain the gas company from cutting off the supply, SWINFEN EADY, J. (following *Paterson v. Gas Light and Coke Co.*, *supra*), decided that the receiver was not in the position of an incoming tenant, and was not entitled to require a supply to the premises while the arrears remained unpaid. *Husey v. Gas Light and Coke Co.* (1902), 18 T.L.R. 299. Cf. *Husey v. London E. S. Corporation*, [1902] 1 Ch. 411, cited *ante*, p. 118.

Sect. 21.

NOTE.

A trustee in bankruptcy is a next tenant within the meaning of s. 48 of the Metropolis Water Act, 1871 (34 & 35 Vict. c. 118). *In re Flack, Ex parte Berry*, [1900] 2 Q. B. 82.

Further as to recovery of charges, see s. 40 of the Gasworks Clauses Act, 1871, and the notes thereto, *post*, p. 229.

**22.** Any person who unlawfully and maliciously cuts or injures any electric line or work with intent to cut off any supply of electricity shall be guilty of felony, and be liable to be kept in penal servitude for any term not exceeding five years, or to be imprisoned with or without hard labour for any term not exceeding two years; but nothing in this section shall exempt a person from any proceeding for any offence which is punishable under any other provision of this Act, or under any other Act, or at common law, so that no person be punished twice for the same offence.

Injuring works with intent to cut off supply of electricity.

**23.** Any person who maliciously or fraudulently abstracts, causes to be wasted or diverted, consumes, or uses any electricity shall be guilty of simple larceny and punishable accordingly.

Stealing electricity.

There is no similar section in the general Acts relating to gas or water. It has been decided, however, that gas may be the subject of larceny at common law. *R. v. White* (1858), 22 L.J.M.C. 128; and water also, *Ferens v. O'Brien* (1888), 11 Q.B.D. 21.

**24.** Any officer appointed by the undertakers may at all reasonable times enter any premises to which electricity is or has been supplied by the undertakers, in order to inspect the electric lines, meters, accumulators, fittings, works, and apparatus for the supply of electricity belonging to the undertakers, and for the purpose of ascertaining the quantity of electricity consumed

Power to enter lands or premises for ascertaining quantities of electricity consumed, or to remove fittings, etc.

**Sect. 24.** or supplied, or where a supply of electricity is no longer required, or where the undertakers are authorised to take away and cut off the supply of electricity from any premises, for the purpose of removing any electric lines, accumulators, fittings, works, or apparatus belonging to the undertakers, repairing all damage caused by such entry, inspection, or removal.

This section corresponds to s. 21 of the Gasworks Clauses Act, 1871. The latter provides for a penalty for hindering such officer.

Electric lines, etc., not to be subject to distress in certain cases.

**25.** Where any electric lines, meters, accumulators, fittings, works, or apparatus belonging to the undertakers are placed in or upon any premises not being in the possession of the undertakers for the purpose of supplying electricity under this Act, or any license, order, or special Act, such electric lines, meters, accumulators, fittings, works, or apparatus shall not be subject to distress or to the landlord's remedy for rent of the premises where the same may be, nor to be taken in execution under any process of a court of law or equity, or any proceedings in bankruptcy against the person in whose possession the same may be.

Cf. s. 18 of the Gasworks Clauses Act, 1871. A gas stove let for hire is a "fitting for the gas" within the meaning of s. 14 of the Gasworks Clauses Act, 1847, and is therefore not subject to distress for rent. *Gas Light and Coke Co. v. Hardy* (1886), 17 Q. B. D. 619.

It is now quite common to find in the Acts of local authorities authorising them to supply electricity, a special clause enabling them to sell, let, hire, etc., but not to manufacture, lamps, meters, electric fittings, apparatus, etc. The terms of such clauses vary somewhat. For instances, see Nottingham Corporation Act, 1899 (62 & 63 Vict. c. ci.), s. 40, where the power conferred is to provide and let, etc., but not manufacture, "lamps, meters, electric lines, fittings, apparatus, and things for lighting and motive power, and for all other purposes for which electric energy can or may be used, or otherwise necessary or proper for the supply, distribution, consumption, or use of electric energy"; the Manchester Corporation (General Powers) Act, 1899 (62 & 63 Vict. ch. clxxxviii.), s. 21, which, after the usual wide powers, contains these words, "electrical motors and apparatus for the use of electricity for motive power and other purposes"; and Halifax Corporation Act, 1898 (61 & 62 Vict. ch. cxlvi.), s. 35, which authorises the Corporation to "purchase, hire, sell, let on hire, or otherwise deal with dynamos, electric motors, accumulators, meters, burners, arc and other lamps, fittings, wires, plant, engines, conductors, machinery, apparatus and appliances for or in relation to the production, supply, distribution or utilisation of electricity, or required or used for or in connection with their electrical works and undertaking."

In all cases where power to supply fittings is given by special Act, a special provision is made to exempt such things from liability to distress or execution.

On the subject of power to deal in fittings, see further, *ante*, p. 29.



**26.** No alteration in any telegraph line of the Postmaster-General shall be made by the undertakers except subject to the provisions of the Telegraph Act, 1878.

**Sect. 26.**

Provision for  
protection of  
the Post-  
master  
General.

41 & 42 Vict.  
c. 76.

The undertakers shall not in the exercise of the powers conferred by this Act, or by any license, order, or special Act, lay down any electric line or do any other work for the supply of electricity whereby any telegraphic line of the Postmaster-General is or may be injuriously affected, and before any such electric line is laid down or work is done within ten yards of any part of a telegraphic line of the Postmaster-General (other than repairs or the laying of connexions with mains where the direction of the electric lines so laid down crosses the line of the Postmaster-General at right angles at the point of shortest distance and continues the same for a distance of six feet on each side of such point) the undertakers or their agents not more than twenty-eight nor less than seven clear days before commencing such work shall give written notice to the Postmaster-General specifying the course and nature of the work, including the gauge of any electric lines, and the undertakers and their agents shall conform with such reasonable requirements either general or special as may from time to time be made by the Postmaster-General for the purpose of preventing any telegraphs of the Postmaster-General from being injuriously affected by the said work.

Any difference which arises between the Postmaster-General and the undertakers or their agents with respect to any requirements so made, shall be determined by arbitration.

In the event of any contravention of or wilful non-compliance with this section by the undertakers or their agents the undertakers shall be liable to a fine not exceeding ten pounds for every day during which such contravention or non-compliance continues, or, if the telegraphic communication is wilfully interrupted, not exceeding fifty pounds for every day on which such interruption continues.

Provided that nothing in this section shall subject the undertakers or their agents to a fine under this section, if they satisfy the court having cognizance of the case that the immediate execution of the work was required to avoid an accident, or otherwise was a work of emergency, and that they forthwith served on the postmaster or sub-postmaster of the postal telegraph office nearest to the place where the work was done a notice of the execution thereof, stating the reason for executing the same without previous notice.

## Sect. 26.

For the purposes of this section a telegraphic line of the Postmaster-General shall be deemed to be injuriously affected by a work if telegraphic communication by means of such line is, whether through induction or otherwise, in any manner affected by such work, or by any use made of such work.

For the purposes of this section, and subject as therein provided, sections two, seven, eight, nine, ten, eleven, and twelve of the Telegraph Act, 1878, shall be deemed to be incorporated with this Act, as if the undertakers were undertakers within the meaning of those sections, without prejudice nevertheless to any operation which the other sections of the said Act would have had if this section had not been enacted.

See further, s. 85, *infra*, saving privileges, etc., of Postmaster-General, p. 184.

Provisional orders have heretofore further contained a special section preserving any right or remedy of the Postmaster-General. See now s. 79 of the schedule to the Electric Lighting (Clauses) Act, 1899, p. 208. See also ss. 14 and 20 of the same schedule, pp. 168 and 179.

*The incorporated sections of the Telegraph Act, 1878\* (41 & 42 Vict. c. 76), are as follows:—*

41 & 42 Vict.  
c. 76.  
Definitions.

2. In the construction of this Act, unless there is something inconsistent in the context, words and expressions shall have the same meanings as in the Telegraph Act, 1863, and in addition thereto—

The expressions “street” and “public road” shall respectively include any highway :

The expression “Act of Parliament” means any Act of Parliament, whether public general, local and personal, or private, and includes the order confirmed by any such Act, and includes a certificate granted by the Board of Trade under the Railways Construction Facilities Act, 1864† :

36 & 37 Vict.  
c. 112.  
39 & 40 Vict. c. 3.  
81 & 82 Vict.  
c. 110.  
82 & 83 Vict. c. 73.  
83 & 84 Vict. c. 88.

The expression “Telegraph Acts” includes the Telegraph Act, 1863, the Telegraph Act Amendment Act, 1866, the Telegraph Act, 1868, the Telegraph Act, 1869, the Telegraph Act, 1870, this Act and any Acts or parts of Acts incorporated with such Acts or referred to therein,

\* The provisions of this Act are extended by 55 & 56 Vict. c. 59, ss. 3 and 8, to streets, roads, lands, and buildings in urban districts, and also to pneumatic and other tubes used for the purpose of transmitting telegraphic messages or maintaining telegraphic communication in like manner as they apply to telegraphs underground.

† By the Light Railways Act (59 & 60 Vict. c. 48), s. 25, the definition of “Act of Parliament” in the Telegraph Act, 1878, is made to include an order authorising a light railway under that Act. By the Public Health (Scotland) Act, 1897 (60 & 61 Vict. c. 38), s. 145 (15), the same expression is made to include an order under that section, although such order may not have been confirmed by Parliament.

any or either of them, and such several Acts may be cited together as the Telegraph Acts, 1863 to 1878 † :

**Sect. 26.**

NOTE.

The expression "undertaking" means the works or undertaking of whatever nature the execution of which is authorised by an Act of Parliament as above defined :

The expression "undertakers" means the parties, whether company, commissioners, trustees, corporations, or private persons, empowered by an Act of Parliament as above defined to execute an undertaking, and any lessee or tenant thereof :

The expression "agents" includes contractors, and also the officers, engineers, workmen, or servants, as well of the Postmaster-General, undertakers, bodies or persons, as of his or their contractors :

The expression "telegraphic line" means telegraphs, posts, and any work (within the meaning of the Telegraph Act, 1863), § and also any cables, apparatus, pneumatic or other tube, pipe, or thing whatsoever used for the purpose of transmitting telegraphic messages or maintaining telegraphic communication, and includes any portion of a telegraphic line as defined by this Act :

The expressions "alteration," "alter," and "altering" in respect of a telegraphic line, include the substitution of any new line or portion of a line, either in the same place or in some other place, also any removal of or other dealing with any telegraphic line or any part of such line.

\* \* \* \* \*

7. Where any work proposed to be done in the execution of an undertaking authorised by an Act of Parliament involves or is likely to involve an alteration either temporarily or permanently in any telegraphic line of the Postmaster-General, and provision is not otherwise made by enactment, agreement, or otherwise, with respect to such alteration or to giving notice to the Postmaster-General thereof or to the expenses of or incidental thereto, the following enactments shall apply :

41 & 42 Vict.  
c. 76.  
Provision as  
to work done  
in pursuance  
of special  
Acts of  
Parliament  
which  
involves  
alteration in  
telegraphic  
line.

- (1.) The undertakers or their agents shall give to the Postmaster-General not less than seven nor more than fourteen days' previous notice of the time and place at which the work will be begun and the nature of the alteration required :
- (2.) Before the expiration of seven days after the notice is given the Postmaster-General may give the undertakers or their agents a counter-notice either stating his intention himself to make, or requiring the undertakers to make under the supervision and to the satisfaction of himself or his agents, such alteration in the telegraphic line as he deems necessary or expedient to be made in consequence of the proposed work :
- (8.) If the Postmaster-General by his counter-notice states that it is his intention himself to make such alteration, it shall be lawful for

† The Telegraph Acts now comprise various subsequent Acts extending to and including the Telegraph Act, 1899 (62 & 63 Vict. c. 38).

§ The Telegraph Act, 1863, s. 3, contains the following definition : "The term 'work' includes telegraphs and posts."

**Sect. 28.****NOTE.**

such Postmaster-General by himself or his agents to make the same, and the undertakers or their agents shall pay to the Postmaster-General all the expenses incurred by him of and incidental thereto, and the amount of any loss or damage sustained by him in consequence thereof :

- (4.) If the Postmaster-General by his counter-notice requires the undertakers or their agents to make such alteration, the undertakers or their agents shall, at their own expense, make the same under the supervision and to the reasonable satisfaction of the Postmaster-General or his agents, and the said undertakers shall pay to the Postmaster-General all the expenses incurred by him of and incidental to such supervision, also the amount of any loss or damage sustained by him in consequence of the alteration :
- (5.) If the Postmaster-General fails to give a counter-notice, or if, having undertaken himself to make the alteration, he or his agents should fail to make within a reasonable time the alteration, the undertakers or their agents may themselves make the alteration to the reasonable satisfaction of the Postmaster-General or his agents :
- (6.) If any undertakers or their agents fail to serve on the Postmaster-General such notice as is required by this section with respect to any work, or begin to do the work specified in a notice served under this section before the expiration of seven days after the notice is given, they shall be liable to pay a fine not exceeding ten pounds for every day during which they continue such work without the sanction in writing of the Postmaster-General, and the Postmaster-General may at the expense of the undertakers remove such work :
- (7.) If any undertakers or their agents fail to comply with the reasonable requirements of the Postmaster-General or his agents under this section, they shall be liable to a fine not exceeding ten pounds for every day during which such failure continues, or if the telegraphic communication is interrupted, not exceeding fifty pounds for every day on which such interruption continues :
- (8.) Provided, that nothing in this section shall subject any undertakers or their agents to a fine for omitting to comply with any requirements of the Postmaster-General or his agents, or for executing without previous notice any work if they satisfy the court having cognizance of the case that any such requirement was unreasonable or that the immediate execution of the work was required to avoid an accident, or otherwise was a work of emergency, and that they forthwith served on the postmaster or sub-postmaster of the postal telegraph office nearest to the place where the work was done a notice of the execution thereof, stating the reason for executing the same without previous notice.

And where under section eight of the Telegraph Act, 1868, any body to or by whom any such pipe as in that section mentioned belongs or is used require that the position of any telegraphic line of the Postmaster-General or any part thereof should be altered, the enactments of the present section shall apply, and for such purposes any such body shall be deemed to be "undertakers."

8. Where any undertakers, body, or person, by themselves or by their agents, destroy or injure any telegraphic line of the Postmaster-General, such undertakers, body, or person shall not only be liable to pay to the Postmaster-General such expenses (if any) as he may incur in making good the said destruction or injury, but also, if the telegraphic communication is carelessly or wilfully interrupted, shall be liable to a fine not exceeding twenty pounds per day for every day during which such interruption continues.

Where the undertakers, body, or person liable to pay such daily fine as aforesaid to the Postmaster-General are not authorised to execute such works as may be required for remedying the interruption, the interruption shall be deemed to continue either for the time during which it actually continues or for such less time as in the opinion of the court having cognizance of the case would have been sufficient for remedying the interruption by the Postmaster-General.

The Postmaster-General may, instead of taking proceedings for the recovery of such daily fine as aforesaid, proceed for the recovery of a fine not exceeding fifty pounds, to which the undertakers, body, or person shall be liable on summary conviction.

An act done to a telegraphic line in the course of work undertaken by any undertakers, body, or person in the legal exercise of a right, shall not be deemed to be wilful destruction of, or injury to, such telegraphic line, if due notice of the intended exercise of such right has been given to the Postmaster-General, that is to say, the notice required to be given in pursuance of any Act of Parliament or agreement, or where there is no Act of Parliament or agreement requiring such notice, fourteen clear days' notice.

This section shall be deemed to be in addition to, and not in derogation of, any other power or means which the Postmaster-General may have of recovering damages in respect of any such destruction or injury as in this section mentioned under any other Act of Parliament or at common law or otherwise, provided that he shall not proceed under this Act and under any other Act or law in respect of the same destruction or injury.

9. Where any undertakers, body, or person or their agents obstruct the Postmaster-General or his agents in placing, maintaining, altering, examining, or repairing any telegraphic line in pursuance of this Act, or of any consent given in pursuance of this Act, or in supervising or directing any alteration in any telegraphic line made by any undertakers or their agents in pursuance of this Act, such undertakers, bodies, or persons and agents respectively shall for every act of obstruction be liable to a fine not exceeding ten pounds, or in case such obstruction continues, ten pounds for every day during which the same continues.

10. All fines and penalties under any of the Telegraph Acts may be recovered by the Postmaster-General in manner provided by the Summary Jurisdiction Acts before a court of summary jurisdiction, and for the purposes of this Act—

(1.) The expression "Summary Jurisdiction Acts" means, as respects England:—

(This sub-section so far as respects England is repealed by the Statute Law Revision Act, 1894 (57 & 58 Vict. c. 56). See now

## Sect. 26.

### NOTE.

41 & 42 Vict. c. 76.

Compensation and fine for injury to telegraphic line of the Postmaster-General and for interruption to telegraphic communication.

41 & 42 Vict. c. 76.

Penalty for obstruction.

41 & 42 Vict. c. 76.

Prosecution of offences.

**Sect. 28.**

the definition in the Interpretation Act, 1889 (52 & 53 Vict. c. 68), s. 18 (10).)

**NOTE.**

27 & 28 Vict.  
c. 53.

As respects Scotland, the Summary Procedure Act, 1864, and any Act passed or to be passed amending the same ; and,

14 & 15 Vict.  
c. 93.

As respects Ireland, within the police district of Dublin metropolis, the Acts regulating the powers and duties of justices of the peace for such district, or of the police of that district, and elsewhere in Ireland the Petty Sessions (Ireland) Act, 1851, and any Act passed or to be passed amending the said Acts, or any of them ; and

(2.) The expression " court of summary jurisdiction " means—

As respects England, any justice of the peace or other magistrate or officer to whom jurisdiction is given by the Summary Jurisdiction Acts, so, however, that any case arising under any of the Telegraph Acts shall be heard and determined either by two or more justices of the peace in petty sessions sitting at a court or other place appointed for holding petty sessions, or by some magistrate or officer sitting alone or with others at some court or other place appointed for the administration of justice, and for the time being empowered by law to do alone any act authorised to be done by more than one justice of the peace ; and

As respects Scotland, means any sheriff or sheriff substitute ; and

As respects Ireland, means any justice or justices or other magistrate, by whatever name called, having jurisdiction under the Summary Jurisdiction Acts.

All fines and penalties recovered in pursuance of any of the Telegraph Acts shall be paid into the Exchequer.

**11.**

41 & 42 Vict.  
c. 76.

Provision as  
to Post-  
master  
General.

. . . \*Any legal proceeding may be instituted by the Postmaster-General for any of the purposes of any of the Telegraph Acts in the name of Her Majesty's Postmaster-General . . . , and shall not abate or be discontinued by reason of any change in the person who is Postmaster-General, but may be carried on as if Her Majesty's Postmaster-General . . . were a body corporate ; and where any sum is due or payable to the Postmaster-General under any of the Telegraph Acts, or any contract, agreement, or regulations made in pursuance or for any of the purposes of those Acts or any of them, the Postmaster-General may recover the same as a debt in any court and in any manner in which it might be recovered if it were a debt due to a private person.

41 & 42 Vict.  
c. 76.

**12.** A notice under this Act may be in writing or print, or partly in writing and partly in print.

Any notice, appointment, direction, or document given, issued, or made for the purposes of this Act by the Postmaster-General shall be sufficiently

\* The earlier portion of this section, containing a definition of " Postmaster-General," is repealed by the Statute Law Revision Act, 1894 (57 & 58 Vict. c. 56), which also repeals certain words which are omitted in the section. See now the definition in the Interpretation Act, 1889 (52 & 53 Vict. c. 63), s. 12 (11).

authenticated if purporting to be signed by a secretary or assistant-secretary of the post office, or by a superintending engineer of the Postmaster-General, or by an officer appointed for the purpose by the Postmaster-General, and when so authenticated shall be deemed to be given, issued, or made by the Postmaster-General.

Where a notice is given by any undertakers, body or person, the notice shall be sufficiently authenticated if purporting to be signed by the chairman, secretary, clerk, or other officer of such undertakers, body, or person.

A notice required to be given under this Act to the Postmaster-General may be given by leaving the same at or by forwarding the same by post to the General Post Office in a letter addressed to the Postmaster-General or to the Secretary of the Post Office, or to an assistant-secretary of the post office, or by delivering the same to or forwarding the same by post in a letter addressed to the superintending engineer of the Postmaster-General for the district in which is the work, telegraphic line, or other matter referred to in the notice and addressed to him at his office or usual place of abode.

A notice required to be given under this Act to any undertakers or body may be given by leaving the same at or by forwarding the same by post to the office, or where there is more than one office the principal office of such undertakers or body in a letter addressed to such undertakers or body, or to their chairman, secretary, clerk, or other officer.

A notice required to be given under this Act to any person may be given by delivering the same to such person or by leaving the same at or forwarding the same by post in a letter addressed to such person at his usual or last known place of abode.

Where a notice is forwarded by post it shall be deemed to have been given at the time when the letter containing the same would be delivered in the ordinary course of post, and in proving the giving thereof it shall be sufficient to prove that the same was properly addressed and put into the post.

The expression "notice" in this section shall be deemed to include a counter-notice.

## 27. *Repealed.*

This section provided that the local authority might after the expiration of a period of twenty-one years or after every subsequent period of seven years, purchase the undertaking compulsorily or so much of the same as was within their jurisdiction, "upon terms of paying the then value of all lands, buildings, works, materials and plant of such undertakers suitable to and used by them for the purposes of their undertaking within such jurisdiction, such value to be, in case of difference, determined by arbitration:—Provided that the value of such lands, buildings, works, materials, and plant shall be deemed to be their fair market value at the time of the purchase, due regard being had to the nature and then condition of such buildings, works, materials and plant, and to the state of repair thereof and the suitability of the same to the purposes of the undertaking, and where part only of the undertaking is purchased, to any loss occasioned by severance, but without any addition in respect of compulsory purchase or of goodwill or of any profits which may or might have been or be made from the undertaking or of any similar

E.L.

K

## Sect. 26.

### NOTE.

Printing authentication, and service of notices and other documents.

Purchase of undertaking by local authority.

**Sect. 27.****NOTE.**

considerations." This section was repealed by the Electric Lighting Act, 1888, which substituted terms of purchase somewhat more favourable to the undertakers. See s. 2, *post*, p. 145. The last-mentioned section is practically a re-enactment of the repealed section with the following differences, viz.: the period of forty-two years is substituted for the period of twenty-one years; the period of ten years for the period of seven years; and for the purpose of arriving at market value, the words "and to the circumstance that they are in such a position as to be ready for immediate working" are added to the matters to which due regard is to be had.

**Arbitration.**

**28.** Where any matter is by this Act, or any license, order, or special Act, directed to be determined by arbitration, such matter shall, except as otherwise expressly provided, be determined by an engineer or other fit person to be nominated as arbitrator by the Board of Trade on the application of either party, and the expenses of the arbitration shall be borne and paid as the arbitrator directs.

Any license or provisional order granted under this Act shall be deemed to be a special Act within the meaning of the Board of Trade Arbitrations, etc., Act, 1874.

37 & 38 Vict.  
c. 40.

Board of  
Trade Arbitrations, etc.,  
Act, 1874.

The Act of 1874 provides:—

**PART I.***Board of Trade Inquiries, etc.*

37 & 38 Vict.  
c. 40.

Power of  
Board of  
Trade as to  
inquiry.

**2.** Where, under the provisions of any special Act, passed either before or after the passing of this Act, the Board of Trade are required or authorised to sanction, approve, confirm, or determine any appointment, matter, or thing, or to make any order or to do any other act or thing for the purposes of such special Act, the Board of Trade may make such inquiry as they may think necessary for the purpose of enabling them to comply with such requisition or exercise such authority.

Where an inquiry is held by the Board of Trade for the purposes of this section, or in pursuance of any general or special Act passed either before or after the passing of this Act, directing or authorising them to hold any inquiry, the Board of Trade may hold such inquiry by any person or persons duly authorised in that behalf by an order of the Board of Trade, and such inquiry if so held shall be deemed to be duly held.

37 & 38 Vict.  
c. 40.

Expenses connected with  
arbitration,  
sanction, etc.

**3.** Where application is made in pursuance of any special Act passed either before or after the passing of this Act, to the Board of Trade to be arbitrators, or to appoint any arbitrator, referee, engineer, or other person, or to hold any inquiry, or to sanction, approve, confirm, or determine any appointment, matter, or thing, or to make any order, or to do any other act or thing for the purposes of such special Act, all expenses incurred by the Board of Trade in relation to such application and the proceedings consequent thereon, shall, to such amount as the Board of Trade may certify by their order to be due, be defrayed by the parties to such application, and (subject



to any provision contained in the said special Act) shall be defrayed by such of the parties as the Board of Trade may by order direct, or if so directed by an order of the Board of Trade shall be paid as costs of the arbitration, or reference.

Sect. 28.

NOTE.

The Board of Trade may, if they think fit, on or at any time after the making of the application, by order require the parties to the application, or any of them, to pay to the Board of Trade such sum as the Board of Trade think requisite for or on account of those expenses, or to give security to the satisfaction of the Board of Trade for the payment of those expenses on demand, and if such payment or security is not made or given may refuse to act in pursuance of the application.

All expenses directed by an order of the Board of Trade or an award in pursuance of this section to be paid may be recovered in any court of competent jurisdiction as a debt, and if payable to the Board of Trade, as a debt to the Crown; and an order of the Board of Trade shall be conclusive evidence of the amount of such expenses.

4. In this part of this Act the term "special Act" means a local or local and personal Act, or an Act of a local and personal nature, and includes a provisional order of the Board of Trade confirmed by Act of Parliament and a certificate granted by the Board of Trade under the Railways Construction Facilities Act, 1864.

Meaning of  
"special  
Act."

An order of the Board of Trade for the purposes of this part of this Act, or of any such special Act as is referred to in this part of this Act, may be made by writing under the hand of the President, or of one of the secretaries of the Board.

Order of  
Board of  
Trade may be  
in writing.

The Electric Lighting Act, 1882, provides for arbitration in connection with alteration of the position of pipes and wires (s. 15); protection of canals and adjoining owners, etc., constructing docks, basins, and other works (s. 16); compensation for damage (s. 17); dispute as to a consumer using electricity so as to unduly or improperly interfere with the supply to another consumer (s. 18); differences between Postmaster-General and undertakers (s. 26).

Provisions of  
1882 Act as  
to arbitra-  
tion.

Section 2 of the Electric Lighting Act, 1888 (following the repealed s. 27 of the Act of 1882, which it supersedes), also provides for settlement by arbitration of the value of an undertaking on purchase by the local authority.

The schedule to the Electric Lighting (Clauses) Act, 1899, provides for arbitration in connection with the placing of works in streets not repairable by the local authority (s. 15); alteration of position of other people's pipes, wires, etc., under streets (s. 17); the laying of electric lines, etc., near sewers, etc., or gas or water pipes or other electric lines (s. 18); the protection of telegraphic and telephonic wires (s. 20); as to requisition requiring undertakers to lay distributing mains (s. 25); as to difference arising regarding any improper use of energy or any alleged defect in any electric lines, fittings, or apparatus (s. 27); as to difference arising under clause regulating maximum power (s. 28); as to price to be charged for supply to

Provisions of  
Act of 1899 as  
to arbitra-  
tion.

**Sect. 28.****NOTE.**

public lamps (s. 34); as to testing stations (s. 41); and also in certain eventualities where an order is revoked (s. 68). (See *ante*, p. 39.) Prior to the passing of the Act of 1899 special clauses with the above objects were inserted in provisional orders.

Power for Board of Trade to relieve gas undertakers from obligation to supply gas in certain cases.

**29.** Where a supply of electricity is authorised in any area by any license, order, or special Act, and a supply of gas by any gas undertakers is also authorised within such area or any part thereof by any provisional order or special Act under the provisions of which such gas undertakers are under any general or limited obligation to supply gas upon demand, the Board of Trade may, upon the application of such gas undertakers, inquire into the circumstances of the case, and if they are satisfied that any specified part of such area is sufficiently supplied with electric light, and that the supply of gas in such specified part has ceased to be remunerative to the gas undertakers, and that it is just that such gas undertakers should be relieved from the obligation to supply gas upon demand as aforesaid, the Board of Trade may in their discretion make an order relieving the gas undertakers from such obligation, within such specified part of such area, either wholly or in part, and upon such terms and conditions as they may think proper; and from and after the date of such order such gas undertakers shall be so relieved accordingly. All expenses of the Board of Trade in connexion with any such inquiry or order shall be borne and paid by the gas undertakers upon whose application the inquiry or order was made.

By s. 11 of the Gasworks Clauses Act, 1871, a gas company is bound, upon being required so to do by the owner or occupier of any premises situate within twenty-five yards from any main of the undertakers, to give and continue to give a supply of gas for such premises, and they must furnish and lay any pipe that may be necessary for such purpose subject to the conditions set forth in that section. By s. 86 of the same Act penalties are provided for wherever the undertakers neglect or refuse to give a supply of gas to any owner or occupier of premises within the limits of the special Act entitled to the same. The section in the text is intended to remedy any hardship or injustice which may result to gas companies in consequence of their obligations under ss. 11 and 86, in districts where electric light is brought into effective competition with gas.

Some of the Power Acts exclude the above section from incorporation. See the Chapter on POWER ACTS.

Annual report by Board of Trade.

**30.** Not later than the first day of July in each year the Board of Trade shall lay before both Houses of Parliament a report respecting the applications to and proceedings of the Board of Trade under this Act during the year then last past.

The latest return is Parliamentary Paper No. 280 of 1902. The substance of it is stated *ante*, p. 5.

This section is excluded from incorporation by two of the Power Acts, viz., County of Durham and North Metropolitan Power Acts. See Chapter on POWER ACTS, *post*.

**Sect. 30.**  
—  
**NOTE.**

**31.** In this Act, unless the context otherwise requires, the expressions “local authority” and “local rate” mean, as respects each district set forth in the first column of the schedule to this Act annexed, the authority and rate mentioned opposite to that district in the second and third columns of that schedule; and such schedule, and the notes appended thereto, shall be of the same validity as if enacted in the body of the Act.

Definition  
of local  
authority,  
etc.

See notes to the schedule under the heads referred to pp. 186 *et seq*.

**32.** In this Act, unless the context otherwise requires—

Interpreta-  
tion.

The expression “electricity” means electricity, electric current, or any like agency (a) :

The expression “electric line” (b) means a wire or wires, conductor, or other means used for the purpose of conveying, transmitting, or distributing electricity with any casing, coating, covering, tube, pipe, or insulator enclosing, surrounding, or supporting the same, or any part thereof, or any apparatus connected therewith for the purpose of conveying, transmitting, or distributing electricity or electric currents :

The expression “works” (c) means and includes electric lines, also any buildings, machinery, engines, works, matters, or things of whatever description required to supply electricity and to carry into effect the object of the undertakers under this Act :

The expression “company” (d) means any body of persons corporate or unincorporate :

The expression “Lands Clauses Acts” means the Lands Clauses Consolidation Acts, 1845, 1860, and 1869 :

8 & 9 Vict. c. 18.  
23 & 24 Vict.  
c. 106.  
32 & 33 Vict. c. 18.

The expression “street” (e) includes any square, court, or alley, highway, lane, road, thoroughfare, or public passage, or place, within the area in which the undertakers are authorised to supply electricity by this Act or any license, order, or special Act :

The expression “telegram” (f) has the same meaning as in the Telegraph Act, 1869.

32 & 33 Vict.  
c. 73.

(a) In practice, provisional orders issued by the Board of Trade authorise the supply of “energy,” and define this phrase thus: “The expression

**Sect. 32.****NOTE.**

'energy' shall mean electrical energy; and for the purposes of applying the provisions of the principal Act to this order electrical energy shall be deemed to be an agency within the meaning of electricity as defined in the Electric Lighting Act, 1882." See now s. 1 of the schedule to the Electric Lighting (Clauses) Act, 1899, p. 155.

(b) Cf. definition of "telegraph" in the Telegraph Acts, 1868 and 1869, p. 91.

(c) Cf. definition of "work" in Act of 1868, p. 125, footnote.

(d) See p. 98.

(e) Cf. definitions at pp. 124 and 212.

(f) See p. 91.

For the  
protection of  
mines.

**33.** Nothing in this Act shall limit or interfere with the rights of any owner, lessee, or occupier of any mines or minerals lying under or adjacent to any road along or across which any electric line shall be laid to work such mines and minerals.

See notes to s. 6 of the Gasworks Clauses Act, 1847, *post*, p. 212.

Provision as  
to general  
Acts.

**34.** Nothing in this Act shall exempt the undertakers or their undertaking from the provisions of any general Act relating to the supply of electricity which may be passed in this or any future session of Parliament.

See a similar provision contained in the Gasworks Clauses Act, 1847, s. 49, and *Dudley Gasworks Co. v. Warmington* (1881), 50 L. J. M. C. 69, decided under that section.

The above section is excluded from incorporation by some of the Power Acts. See the Chapter on POWER ACTS, *post*. See s. 82 of the Schedule to the Act of 1899, *post*, p. 210.

Saving for  
privileges of  
Postmaster-  
General.

**35.** Nothing in this Act or in any license, order, or special Act, shall affect the exclusive privileges conferred upon the Postmaster-General by the Telegraph Act, 1869, or authorise or enable any local authority, company, or person to transmit any telegram or to perform any of the incidental services of receiving, collecting, or delivering telegrams, or give to any local authority, company, or person, any power, authority, or facility of any kind whatever, in connexion with the transmission of telegrams, or the performance of any of the incidental services of receiving, collecting, or delivering telegrams.

See s. 26, *ante*, p. 128.

See definition of "telegram" and decision in *Att.-Gen. v. Edison Telephone Co.* in notes to s. 8 at p. 91.

*As to Scotland.***Sect. 36.**

**36.** This Act shall apply to Scotland with the following modifications : Application of Act to Scotland.

The expression "Lands Clauses Acts" means the Lands Clauses Consolidation (Scotland) Acts, 1845 and 1860.

8 & 9 Vict.  
c. 19.

The expression "simple larceny" means theft.

The expression "felony" means a high crime and offence.

The expression "public purposes" means lighting any street or any place belonging to or subject to the control of any public authority, or any church or place of public worship, or any hall or building belonging to or subject to the control of any public authority, or any public theatre, but shall not include any other purpose to which electricity may be applied.

The expression "local authority" means as regards streets and roads the authority having the control of the streets and roads.

See the Electric Lighting (Scotland) Acts, 1890 and 1902, *post*, pp. 151—8, which apply exclusively to Scotland.

*As to Ireland.*

**37.** This Act shall apply to Ireland with the following modifications : Application of Act to Ireland.

Where the consent of the grand jury of any county to the breaking up of any road is required under this Act, such consent may be signified by the county surveyor; and where it is required under this Act that notice should be given by the Board of Trade to the grand jury of any county, and an opportunity afforded to such grand jury to state objections, such notice may be given to, and such objections may be stated by, the county surveyor on behalf of the grand jury :

The expression "Public Health Act, 1875," means the Public Health (Ireland) Act, 1878.\* 41 & 42 Vict.  
c. 52.

---

\* This Act has been amended by the Public Health (Ireland) Acts, 1878 to 1896, as defined by the Public Health (Ireland) Act, 1896 (59 & 60 Vict. c. 54), s. 35.

## Schedule.

## SCHEDULE.

## ENGLAND AND WALES.

Districts of Local Authorities.	Description of Local Authority of District set opposite its Name.	The Local Rate.
The city of London and the liberties thereof.	The mayor, commonalty, and citizens acting by the Commissioners of Sewers.	The consolidated sewers rate.
Parts of the metropolis which the Metropolitan Board of Works (a) are authorized to light.	The Metropolitan Board of Works (a).	The consolidated rate (b).
Parish mentioned in Schedule A. (c) to the Metropolis Management Act, 1855.	The vestry (d).	The lighting rate or other fund or rate applicable for lighting.
District mentioned in Schedule B. (c) to the Metropolis Management Act, 1855.	The district board (d).	

(a) *The London County Council now takes the place of the Metropolitan Board of Works. Local Government Act, 1888, s. 40 (8).*

(b) *Now the county rate, levied by the London County Council. Local Government Act, 1888, s. 3 (1), (11), and s. 40 (8), (9).*

(c) *Schedules A. and B. have been altered by the Metropolis Management Amendment Act, 1885 (48 & 49 Vict. c. 33).*

(d) *On the coming into force of the London Government Act, 1899 (62 & 63 Vict. c. 14), these bodies ceased to exist, and their powers and duties were transferred to the borough councils (s. 4).*

## SCHEDULE.

## Schedule.

## ENGLAND AND WALES.

Security upon which Loans are to be contracted.	Authority whose consent is required to borrowing by Local Authority.	Provisions and Restrictions as to borrowing and the Repayment of Loans.	Mode of Audit of Accounts of Local Authority.
The local rate as herein defined.	The Metropolitan Board of Works (a).	Those contained in sections one hundred and eighty-three to one hundred and ninety-one (both inclusive) of the Metropolis Management Act, 1855 (e).	That prescribed by section one hundred and ninety-five of the Metropolis Management Act, 1855 (f).  (continued)

(e) Section 188 has been repealed by 55 & 56 Vict. c. 19. See 32 & 33 Vict. c. 102. As to the borrowing powers of the London County Council, see Local Government Act, 1888, s. 40 (8), (9).

(f) This section provided for an auditor to be appointed by a Secretary of State. The Local Government Act, 1888, supersedes this enactment, and the accounts of the London County Council are now audited by a district auditor appointed by the Local Government Board under s. 71 of that Act.

## Schedule.

ENGLAND AND WALES—*continued*.

Districts of Local Authorities.	Description of Local Authority of District set opposite its Name.	The Local Rate.
Urban sanitary district (1) (g) -	The urban sanitary authority (1) (g).	The fund or rate applicable to the general purposes of the Public Health Act, 1875, in the district, or any other fund or rate applicable to lighting under any local Act (h). <sup>1</sup>
Rural sanitary district (1) (m) -	The rural sanitary authority (1) (m).	The rate or rates out of which special expenses incurred in respect of the contributory place or places (1) comprised within the area of supply are payable under the Public Health Act, 1875 (h).

NOTES.—(1) "Urban sanitary district" (g), "urban sanitary authority" (g), place," have the meanings respectively assigned to them in the Public Health Act,

(2) "Borough" means any place for the time being subject to an Act passed the Fourth, chapter seventy-six, intituled, "An Act to provide for the Regulation

(g) Now called "urban district" and "urban district council" respectively. *Local Government Act, 1894, s. 21.*

(h) See note to s. 7, ante, p. 97.

(i) *The Local Government Board.*

(j) As to these sections, see ante, p. 98.

(k) "Borough" is defined to mean any place subject to the *Municipal Corporations Act, 1835* (now the *Municipal Corporations Act, 1882*). Section 246 of the *Public Health Act, 1875*, requires the accounts to be "audited and examined by the auditors of the borough." The *Municipal Corporations Act, 1882, s. 25*, provides that these auditors shall be three in number, two elected by the burgesses, and one appointed by the mayor.



ENGLAND AND WALES—*continued.*

## Schedule.

Security upon which Loans are to be contracted.	Authority whose consent is required to borrowing by Local Authority.	Provisions and Restrictions as to borrowing and the Repayment of Loans.	Mode of Audit of Accounts of Local Authority.
The local rate as herein defined and any property of the local authority.	The authority whose consent is required to loans under section two hundred and thirty-three of the Public Health Act, 1875 (i).	Those contained in sections two hundred and thirty-three, two hundred and thirty-four, and two hundred and thirty-six to two hundred and thirty-nine (both inclusive) of the Public Health Act, 1875 (j).	In the case of boroughs (2), that prescribed by section two hundred and forty-six (k) of the Public Health Act, 1875, and in the case of other urban sanitary authorities that prescribed by section two hundred and forty-seven of the same Act (l).
The local rate as herein defined.	The authority whose consent is required to loans under section two hundred and thirty-three of the Public Health Act, 1875 (i).	Those contained in sections two hundred and thirty-three, two hundred and thirty-four, and two hundred and thirty-six to two hundred and thirty-nine (both inclusive) of the Public Health Act, 1875 (j).	That prescribed by section two hundred and forty-eight of the Public Health Act, 1875 (n).

“rural sanitary district” (m), “rural sanitary authority” (m), and “contributory 1875.

in the session holden in the fifth and sixth years of the reign of King William of Municipal Corporations in England and Wales,” and the Acts amending the same.

(l) Section 247 requires the accounts to be audited and examined “by the auditors of accounts relating to the relief of the poor for the union.” These auditors (known as district auditors) are appointed by the Local Government Board under the powers of the Poor Law Amendment Act, 1868 (31 & 32 Vict. c. 122), s. 24. See further, the District Auditors Act, 1879 (in parts repealed by 57 & 58 Vict. c. 56), and the Local Government Act, 1888, s. 71 (8).

(m) Now called “rural district” and “rural district council” respectively. Local Government Act, 1894, s. 21.

(n) Section 248 has been repealed (except so far as it relates to overseers) by the Local Government Act, 1894 (s. 89, and Sched. II.), and its place is taken by s. 58 of the Act of 1894, which provides for audit by district auditors.

## Schedule.

## SCOTLAND.

*By the Electric Lighting (Scotland) Act, 1890, s. 1., the following is substituted*

Districts of Local Authorities.	Description of Local Authority of District set opposite its Name.	The Local Rate.
Places within the jurisdiction of any police commissioners or town council empowered by any general or local Act to supply gas (o).	The police commissioners or town council as the case may be.	The gas rates leviable and gas rents and other revenues receivable under the general or local Act.
Places within the jurisdiction of any police commissioners not being empowered by any general or local Act to supply gas.	The police commissioners.	The police or burgh assessment, or rate of a nature of a burgh assessment.
Places within the jurisdiction of any town council not empowered by any general or local Act to supply gas, such places not being subject to the jurisdiction of police commissioners.		
Places within the jurisdiction of any police commissioners or town council, and also within the jurisdiction or limits of any gas commissioners.	The gas commissioners, if so appointed under the provisions of this Act.	The gas rates leviable and gas rents and other revenues receivable by the gas commissioners.
Any county or part thereof over which the jurisdiction of police commissioners or of a town council does not extend.	The county council	The consolidated county rates.

(o) Under the provisions of the *Burghs Gas Supply (Scotland) Act, 1876* (39 & 40 Vict. c. 49), as amended by the *Burghs Gas Supply (Scotland) Act, 1893* (56 & 57 Vict. c. 52), the town council or police commissioners may adopt that Act, and may then erect or acquire gasworks under the special conditions there provided. See ss. 18 to 22 of the Act of 1876. Under the provisions of the *Burgh Police (Scotland) Act, 1892*, the commissioners are required to undertake public lighting by gas or electricity (s. 99). The powers of the commissioners are now transferred to the town councils by the *Town Councils (Scotland) Act, 1900* (63 & 64 Vict. c. 49).

(p) *Burghs Gas Supply (Scotland) Act, 1876*, ss. 27—40. See now the Act of 1902, *post*, p. 153.

(q) The *Town Councils (Scotland) Act, 1900*, s. 94, provides for the annual appointment of an auditor for the purpose of auditing the accounts of the burgh.

## SCOTLAND.

## Schedule.

*for so much of the Schedule to the Act of 1882 as relates to Scotland. See p. 151.*

Security upon which Loans are to be contracted.	Authority whose consent is required to borrowing by Local Authority.	Provisions and Restrictions as to borrowing and the Repayment of Loans.	Mode of Audit of Accounts of Local Authority.
The local rate as herein described.	The Secretary for Scotland.	Those contained in the general or local Act ( <i>p</i> ).	That prescribed by the general or local Act ( <i>q</i> ).
The local rate as herein defined.	The Secretary for Scotland.	Those contained in section eighty-six of the Public Health (Scotland) Act, 1867 ( <i>r</i> ).	That prescribed by the Local Police Act, or, when there is no such Act, by sections seventy-seven and seventy-eight of the General Police and Improvement (Scotland) Act, 1862 ( <i>s</i> ), provided that the expression "commissioners" shall include town council.
The local rate as herein defined, and the rates, charges, and other securities provided by the local Act under which the said commissioners supply gas.	The Secretary for Scotland.	Those contained in the local Act with respect to the borrowing of money for the purposes thereof.	That prescribed by the local Act.
The local rate as herein defined.	The Secretary for Scotland.	Those contained in section sixty-seven of the Local Government (Scotland) Act, 1889 ( <i>t</i> ).	That prescribed by sections sixty-eight to seventy of the Local Government (Scotland) Act, 1889 ( <i>u</i> ).

(*r*) *The Act of 1867 has been repealed by the Public Health (Scotland) Act, 1897, s. 139 of which takes the place of s. 86 of the repealed Act.*

(*s*) *This Act was repealed by the Burgh Police (Scotland) Act, 1892, which by s. 69 required an auditor to be appointed annually by the sheriff on the application of the commissioners. Section 69 has in its turn been repealed by s. 3 of the Town Councils (Scotland) Act, 1900 (63 & 64 Vict. c. 49), which by s. 94 requires the Secretary for Scotland to annually appoint an auditor.*

(*t*) *The section referred to provides for borrowing by county councils. See now the Act of 1902, post, p. 153.*

(*u*) *These sections provide for the audit of the accounts of county councils and the appointment of county auditors by the Secretary for Scotland, and prescribe various regulations with respect to the audit.*

**Schedule.****IRELAND.**

Districts of Local Authorities.	Description of Local Authority of District set opposite its Name.	The Local Rate.
Urban sanitary district (1)	The urban sanitary authority (1) (v)	The rate or rates applicable to the general purposes of the Public Health (Ireland) Act, 1878, or any other fund or rate applicable to lighting under any Local Act.
Rural sanitary district (1)	The rural sanitary authority (1) (w).	The rate or rates out of which special expenses incurred in respect of the contributory place or places (1) comprised within the area of supply are payable under the Public Health (Ireland) Act, 1878.

NOTE.—(1) [(v) and (w)]. “Urban sanitary district,” “urban sanitary authority,” have the meanings respectively assigned to them in the Public Health (Ireland)

(v) *Now the urban district council under the Local Government (Ireland) Act, 1898, ss. 22, 27.*

(w) *Now the rural district council under above Act, ss. 22, 33.*

(x) *The Local Government Board in Ireland.*

(y) *The provisions of these sections are analogous to (though not in all respects identical with) the corresponding sections of the English Act, as to which, see ante, p. 98. See 56 & 57 Vict. c. 38.*

## Schedule.

## IRELAND.

Security upon which Loans are to be contracted.	Authority whose consent is required to borrowing by Local Authority.	Provisions and Restrictions as to borrowing and the Repayment of Loans.	Mode of Audit of Accounts of Local Authority.
The local rate as herein defined.	The authority whose consent is required to loans under section two hundred and thirty - seven of the Public Health (Ireland) Act, 1878 (x).	Those contained in sections two hundred and thirty-seven, two hundred and thirty-eight, and two hundred and forty to two hundred and forty-three (both inclusive) of the Public Health (Ireland) Act, 1878 (y).	That prescribed by section two hundred and forty-eight of the Public Health (Ireland) Act, 1878 (z).
The local rate as herein defined.	The authority whose consent is required to loans under section two hundred and thirty - seven of the Public Health (Ireland) Act, 1878 (a).	Those contained in sections two hundred and thirty-seven, two hundred and thirty-eight, and two hundred and forty to two hundred and forty-three (both inclusive) of the Public Health (Ireland) Act, 1878 (b).	That prescribed by section two hundred and forty-eight of the Public Health (Ireland) Act, 1878 (c).

"rural sanitary district," "rural sanitary authority," and "contributory place," Act, 1878.

(z) By such auditor of the accounts relating to the relief of the poor as the Local Government Board shall appoint.

(a) The Local Government Board in Ireland.

(b) See note (y), *supra*.

(c) See note (z), *supra*.

## ELECTRIC LIGHTING ACT, 1888.\*

(51 & 52 VICT. CAP. 12.)

*An Act to amend the Electric Lighting Act, 1882.*

[28th June 1888.]

BE it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :

Consent of local authority generally required to provisional order for supply of electricity.

1. Notwithstanding anything in the Electric Lighting Act, 1882, no provisional order authorising the supply of electricity by any Undertakers within the district of any local authority shall be granted by the Board of Trade except with the consent of such local authority, unless the Board of Trade, in any case in which the consent of such local authority is refused, are of opinion that, having regard to all the circumstances of the case, such consent ought to be dispensed with, and in such case they shall make a special report, stating the grounds upon which they have dispensed with such consent. The grant of authority to any Undertakers to supply electricity within any area, whether granted by licence or by means of a provisional order, shall not in any way hinder or restrict the granting of a licence or provisional order to the local authority, or to any other company or person within the same area.

This section effects two important purposes. In the first place, it requires the consent of the local authority to a provisional order (such consent having theretofore been required only to the granting of a licence, see ss. 3 and 4 of the Act of 1882, *ante*, pp. 89—92), with power to the Board of Trade to dispense therewith. In the second place, it destroys any idea of monopoly by providing that the granting of a licence or provisional order "shall not in any way hinder or restrict" the granting of another licence or order within the same area. This provision has been acted on especially in metropolitan areas. See further the Chapter on COUNTY OF LONDON, *post*, p. 808.

---

\* Several of the Power Acts exclude from incorporation the whole of this Act of 1888. Others of them exclude only ss. 2 and 3. See more fully the Chapter on the POWER ACTS, *post*.

**2.** Section twenty-seven of the Electric Lighting Act, 1882, is hereby repealed, and in lieu thereof the following provisions shall have effect; that is to say,

**Sect. 2.**

Repeal of  
45 & 46 Vict.  
c. 56, s. 27.

Purchase of  
undertaking  
by local  
authority.

Where any Undertakers are authorised by a provisional order or special Act to supply electricity within any area, any local authority within whose jurisdiction such area or any part thereof is situated may, within six months after the expiration of a period of forty-two years, or such shorter period as is specified in that behalf in the provisional order or in the special Act, from the date of the passing of the Act confirming such provisional order, or of such special Act, and within six months after the expiration of every subsequent period of ten years, or such shorter period as is specified in that behalf in the provisional order or in the special Act, by notice in writing require such Undertakers to sell, and thereupon such Undertakers shall sell to them their undertaking, or so much of the same as is within such jurisdiction, upon terms of paying the then value of all lands, buildings, works, materials, and plant of such Undertakers suitable to and used by them for the purposes of their undertaking within such jurisdiction, such value to be in case of difference determined by arbitration: Provided that the value of such lands, buildings, works, materials, and plant shall be deemed to be their fair market value at the time of the purchase, due regard being had to the nature and then condition of such buildings, works, materials, and plant, and to the state of repair thereof, and to the circumstance that they are in such a position as to be ready for immediate working, and to the suitability of the same to the purposes of the undertaking, and, where a part only of the undertaking is purchased, to any loss occasioned by severance; but without any addition in respect of compulsory purchase, or of goodwill, or of any profits which may or might have been or be made from the undertaking, or of any similar considerations. The Board of Trade may determine any other questions which may arise in relation to such purchase, and may fix the date from which such purchase is to take effect, and from and after the date so fixed, or such other date as may be agreed upon between the parties, all lands, buildings, works, materials, and plant so purchased as aforesaid shall vest in the local authority which has made the purchase, freed from any debts, mortgages, or similar obligations of such

**Sect. 2.**

Undertakers or attaching to the undertaking, and the powers of such Undertakers in relation to the supply of electricity under this Act or such provisional order or special Act as aforesaid within such area or part thereof as aforesaid shall absolutely cease and determine, and shall vest in the local authority aforesaid.

This and the following section are excluded from incorporation by all the Power Acts. See more fully the Chapter on the POWER ACTS, *post*.

This section takes the place of s. 27 of the Electric Lighting Act, 1882. See the notes, *ante*, p. 129. It substitutes forty-two years and ten years respectively for the twenty-one and seven years respectively of that section; and the words "and to the circumstance that they are in such a position as to be ready for immediate working" did not occur in the repealed section. In other respects, the section in the text is in the same terms as the repealed section.

See notes to s. 8, *ante*, p. 98, as to the power of a local authority to borrow money under the Electric Lighting Acts.

As to the date from which the forty-two years run in the case of orders in operation within the county of London, see the note to s. 8, *infra*.

By the Finance Act, 1895 (58 & 59 Vict. c. 16), s. 12, it is provided that where by virtue of any Act (a) any property is vested by way of sale in any person or (b) any person is authorised to purchase property, such person shall within three months after the passing of the Act or the date of vesting, whichever is later or after the completion of the purchase as the case may be, produce to the Commissioners of Inland Revenue a copy of the Act or some instrument relating to the vesting in the first case, and an instrument of conveyance of the property in the other case, duly stamped with the *ad valorem* duty payable upon the conveyance on sale of the property. The Eastbourne Corporation entered into an agreement dated April 19th, 1899, for the purchase from the Eastbourne Electric Light Co., Limited, of their undertaking sanctioned by a provisional order of 1890, and duly confirmed. The purchase was to include various goods, wares, and merchandise, and the price was to be ascertained in the method thereby provided. In the result the price was ascertained to be 88,749*l.* 2*s.* 9*d.* as the consideration for the sale, whereof 87,929*l.* was in respect of such goods, wares, and merchandise. The Corporation obtained a provisional order in the same year (confirmed by 62 & 63 Vict. c. cxxvi.). By s. 8 of that order the Corporation were authorised to buy and the company to sell the undertaking in conformity with that section. The purchase was duly completed, and payment of the purchase money was made. The defendants were willing to produce to the Commissioners of Inland Revenue an instrument of conveyance stamped with *ad valorem* duty upon the consideration above mentioned, excluding the 87,929*l.* The Court of Appeal, on a case stated, decided that s. 12 of the Finance Act, 1895, applies to personal as well as to real property, and, therefore, that an instrument of conveyance must be produced stamped with the *ad valorem* duty in respect of the whole property so purchased. *Att.-Gen. v. Eastbourne Corporation*, [1902] 1 K. B. 408.

Power to  
vary terms

3.—Notwithstanding anything in the last preceding section contained, the Board of Trade may by any provisional order to



be made by them under the Electric Lighting Act, 1882, if they think fit, vary the terms upon which any local authority may require the Undertakers to sell, and upon which the Undertakers shall be required to sell to such local authority their undertaking or so much of the same as is within the jurisdiction of such local authority under the said section, in such manner as may have been agreed upon between such local authority and the Undertakers.

**Sect. 3.**  
—  
of sale  
contained in  
last section.

See the first note to the preceding section.

In county of London orders in favour of companies, it is the practice to provide that the period of forty-two years shall run from one fixed date, viz., August 26th, 1889. See, *e.g.*, s. 66 of Lewisham Electric Lighting Order, 1901, confirmed by 1 Edw. 7, ch. clxxviii.

County of  
London  
Orders.

The object in view is to secure that in the event of a purchase, the whole electric lighting concerns of the metropolis in the hands of undertakers other than local authorities may be acquired at one and the same time. Provisional orders in favour of companies or persons within the county of London specially provide that the recurring period of seven years for seeking to alter prices or methods of charge shall begin to run from August 26th, 1889.

The recurring period of ten years for purchase is sometimes by arrangement varied in provisional orders. For an instance, see the County of London (East) Electric Lighting Order, 1897, s. 65, where the period of seven years is substituted. For an instance where special terms were arranged and inserted in the provisional order regarding time of purchase, price, etc., see Blackheath and Greenwich District Electric Lighting Order, 1897, s. 65.

In a recent county of London provisional order a section was inserted authorising the local authority to require the undertakers to sell at the expiration of a period of ten years from the commencement of the order, or at the expiration of every subsequent period of one year, this power of purchase being in addition to and not in derogation of the power of the local authority to purchase under s. 2 of the Act of 1888. Lewisham Electric Lighting Order, 1901, confirmed by 1 Edw. 7, ch. clxxviii. See further the Chapter on COUNTY OF LONDON, *post*, p. 808.

4.—(1.) Where in any case any electric line or other work may have been laid down or erected in, over, along, across, or under any street, for the purpose of supplying electricity, or may have been laid down or erected in any other position for such purpose in such a manner as not to be entirely enclosed within any building or buildings, or where any electric line or work so laid down or erected may be used for such purpose otherwise than under and subject to the provisions of a licence, order, or special Act, the Board of Trade, if they think fit, may, by notice in writing under the hand of one of the secretaries or assistant secretaries of the Board of Trade, to be served upon the body or person

Restrictions  
as to placing  
of electric  
lines, etc.

**Sect. 4 (1).** owning or using or entitled to use such electric line or work, require that such electric line or work shall be continued and used only in accordance with such conditions and subject to such regulations for the protection of the public safety and of the electric lines and works of the Postmaster-General, and of other electric lines and works lawfully placed in any position and used for telegraphic communication, as the Board of Trade may by or in pursuance of such notice prescribe, and in case of non-compliance with the said regulations then the Board of Trade may require such body or person to remove such electric line or work: Provided that nothing in this sub-section shall apply to any electric line or work laid down or erected by any body or person for the supply of electricity generated upon any premises occupied by such body or person to any other part of such premises.

(2.) Where in any case any electric line or work is used for the supply of electricity in such a manner as to injuriously affect any telegraphic line of the Postmaster-General or to affect the telegraphic communication through any such line, the Postmaster-General may, by notice to be served upon the body or person owning or using or entitled to use such electric line or work, require that such supply be continued only in accordance with such conditions and regulations for the protection of the telegraphic lines of the Postmaster-General and the telegraphic communication through the same as he may by or in pursuance of such notice prescribe, and in default of compliance with such conditions and regulations\* the Postmaster-General may require that the supply of electricity through such electric line or work shall be forthwith discontinued: Provided that nothing in this sub-section shall apply to the supply of electricity through any electric line or work laid down or erected under and subject to the provisions of any licence, order, or special Act, or which may be used in accordance with any conditions or regulations prescribed by the Board of Trade by or in pursuance of any notice given by them under this section.

(3.) If any body or person fails to comply with the requirements of any notice which may be served upon them or him under this section, such body or person shall be liable to a penalty not

---

\* The department does not make use of any specific form of notice or of conditions and regulations in taking action under this sub-section. When cases have occurred it has been found necessary, on account of the diversified nature of such undertakings, to consider each one on its merits and to take such special steps to safeguard the interests of the department as the particular circumstances require. See also sub-a. (6), p. 149.

exceeding twenty pounds for every such offence, to be recovered summarily, and any court of summary jurisdiction, on complaint made, may make an order directing and authorising the removal of any electric line or work specified in such notice by such person and upon such terms as they may think fit. **Sect. 4 (3).**

(4.) Any notice authorised to be served under this section upon any body or person may be served by the same being addressed to such body or person, and being left at or transmitted through the post to any office of such body or the usual or last known place of abode of such person; and any notice so served by post shall be deemed to have been served at the time when the letter containing the notice would be delivered in the usual course of post, and in proving such service it shall be sufficient to prove that the letter containing the notice was properly addressed and put into the post.

(5.) In this section terms and expressions to which by the Electric Lighting Act, 1882, meanings are assigned shall have the same respective meanings, provided that the term "street" shall include any square, court, or alley, highway, lane, road, thoroughfare, or public passage or place whatever, and the expression "telegraphic line" shall have the meaning assigned to it by the Telegraph Act, 1878. 45 & 46 Vict.  
c. 56.

(6.) Nothing in this section shall apply to any electric line or work of the Postmaster-General, or to any other electric line or work used or to be used solely for telegraphic purposes, except by way of protection, as in this section provided. 41 & 42 Vict.  
c. 76.

The purpose of this section is to bring under the control of the Board of Trade existing lines and works for supplying electricity which have been laid down without licence, provisional order, or special Act, and which were thus free of such control. In pursuance of this section, the Board of Trade have issued regulations which will be found *post*, p. 261. The first of these regulations provides as follows:—"Nothing in these regulations shall be deemed to authorise the owner to break up or interfere with any street." Speaking generally, these regulations are as far as possible similar to the regulations made by the Board of Trade for lines and works under licence, provisional order, or special Act. Thus it will be found that regulations 8, 5—11, 15, and 16, 19—46 are substantially the same,—the word "owner" (see definition) being substituted for "undertakers." Regulation 2 prohibits earth connection unless as there provided. Regulation 4 limits the pressure between any two conductors or between any part of either conductor and the earth to 8,000 volts. Regulation 14 substitutes 100,000 watts, for the 800,000 in the ordinary regulations as the limit which a high-pressure electric line may be used for transmitting. Regulation 17 provides precautions against injurious affection by induction, and regulation 18 contains certain special provisions for the protection of the Postmaster-General.

**Sect. 4.****NOTE.**

Urban authorities by adopting Part II. of the Public Health Acts Amendment Act, 1890 (53 & 54 Vict. c. 59), may acquire power to make byelaws for prevention of danger or obstruction to the public from posts, wires, tubes, or any other apparatus stretched or placed above, over, along, or across any street (whether before or after the adoption of that part of the Act) for the purpose of any telegraph, telephone, lighting, railway signalling, or other purpose. See further, *ante*, p. 96. For form of byelaws generally approved by the Board of Trade, see *post*, p. 271. These byelaws will affect electric works not authorised under the Electric Lighting Acts, 1882 and 1888. See further, the notes to s. 14 of the Act of 1882, *ante*, pp. 111 *et seq.*

A man who creates on his land an electric current for his own purposes and discharges it into the earth beyond his control is, on the principle of *Fletcher v. Rylands* (1868), L. R. 3 H. L. 880, as responsible for the damage caused by that current as he would have been, if instead, he had discharged a stream of water. *National Telephone Co. v. Baker*, [1898] 2 Ch. 186. See further, notes to s. 10 of the Electric Lighting Act, 1882, *ante*, p. 102.

For definition of "telegraphic line" as used in this section, see *ante*, p. 125.

**Short title.**

**5.** This Act may be cited as the Electric Lighting Act, 1888; and the Electric Lighting Act, 1882, and this Act shall be read and construed together as one Act, and may be cited together for all purposes as the Electric Lighting Acts, 1882 and 1888.

See note to s. 1 of the Act of 1882, at p. 88.

# ELECTRIC LIGHTING (SCOTLAND) ACT, 1890.

(53 & 54 VICT. CAP. 13.)

*An Act to amend the Electric Lighting Acts, 1882 and 1888.*

[4th July 1890.]

BE it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :—

1. The schedule annexed to this Act shall be substituted for so much of the schedule annexed to the Electric Lighting Act, 1882, as relates to Scotland, and any reference in the principal Act to such last-mentioned schedule shall, as respects Scotland, be construed as a reference to the schedule to this Act.

Amendment  
of schedule of  
45 & 46 Vict.  
c. 56.

See this new Schedule, *ante*, p. 140.

2. Where the district of any police commissioners or town council is also within the jurisdiction or limits of any gas commissioners, the police commissioners, or where they are the local authority the town council, may appoint the gas commissioners to be the local authority for such district for the purposes of the principal Act, and after the publication of such appointment in the Edinburgh Gazette the gas commissioners shall be the local authority for such district accordingly.

Delegation  
by certain  
local autho-  
rities.

An appointment under the provisions of this section shall not be made without the consent of the gas commissioners, which consent they are hereby authorised to give, and such appointment shall not be made or consent given except by resolution to be passed at a special meeting of the police commissioners, or town council, or gas commissioners, as the case may be, held after one month's previous notice of the same, and of the purpose thereof, has been given in the manner in which notices of meetings of such authority or body are usually given. Provided that during one month next after the passing of this Act any such special meeting may be held after three clear days' previous notice as aforesaid.

Provided always that where the jurisdiction or limits of any gas commissioners include the districts of more than one body of police commissioners or town council, any appointment of the gas commissioners under this section shall not be made except by resolution to be passed as aforesaid by each such body of police

**Sect. 2.** commissioners or town council, as the case may be, and after such publication as aforesaid the gas commissioners shall be the local authority for all such districts so included.

Provided further that, where the police commissioners are by this Act the local authority, any consent or resolution already given or passed by them to the effect that the gas commissioners shall promote or obtain any provisional order in the present session of Parliament shall, for the purposes of this Act, be a sufficient appointment of such gas commissioners under the provisions of this Act.

Validation of notices, etc., for present session.

**3.** All notices and other documents served upon any police commissioners, town council, or gas commissioners, and all things done by or to any of the said authorities under the provisions of the principal Act or of the rules made by the Board of Trade thereunder for the purposes of provisional orders intended to be submitted to Parliament for confirmation during the present session of Parliament, shall be of the same validity as if the authority in question had been the local authority constituted by this Act, and in the case of any application made before the passing of this Act by any body constituted the local authority by or under this Act, the Board of Trade may entertain such application although the same has not been made in pursuance of a resolution passed at a special meeting of the said authority according to the provisions of the Electric Lighting Act, 1882.

Interpretation.

**4. In this Act—**

The expression “police commissioners” includes any trustees exercising the functions of police commissioners under any general or local Act.

The expression “gas commissioners” means any public commissioners or board empowered by any local Act to supply gas, but does not include any police commissioners or town council empowered by any general or local Act to supply gas.

The expression “the principal Act” means the Electric Lighting Acts, 1882 and 1888, and any other Acts or parts of Acts incorporated therewith.

Saving.

**5.** Nothing in this Act shall affect any licence, order, or special Act granted, confirmed, or passed, before the passing of this Act.

Short title and extent.

**6.** This Act may be cited as the Electric Lighting (Scotland) Act, 1890, and shall be construed as one with the principal Act, but shall extend only to Scotland.

See note to s. 1 of the Act of 1882, at p. 88.

## SCHEDULE.

*(The Schedule to this Act is inserted at p. 140.)*

# ELECTRIC LIGHTING (SCOTLAND) ACT, 1902.

(2 EDW. 7, CAP. 35.)

*An Act to amend the borrowing provisions of the Electric Lighting Act, 1882, and the Electric Lighting (Scotland) Act, 1890.*  
[18th December, 1902.]

BE it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :—

1. The amount which a local authority within the meaning of the schedule to the Electric Lighting (Scotland) Act, 1890, may borrow under section eight of the Electric Lighting Act, 1882, shall not be subject to any limit imposed on the amount which such local authority may borrow for the purposes of its gas undertaking: Provided that every loan so borrowed, with the consent of the Secretary for Scotland, after the passing of this Act, shall be repaid by the local authority within a period not exceeding thirty years from the date of borrowing.

Amount and period of repayment of loans for electric lighting.  
53 & 54 Vict. c. 13.  
45 & 46 Vict. c. 56.

2. Nothing in this Act shall affect any loan borrowed before the passing of this Act.

Saving.

3. This Act may be cited as the Electric Lighting (Scotland) Act, 1902, and shall extend only to Scotland.

Short title and extent.

## ELECTRIC LIGHTING (CLAUSES) ACT, 1899.

(62 & 63 VICT. CAP. 19.)

*An Act for incorporating in one Act certain provisions usually contained in Provisional Orders made under the Acts relating to Electric Lighting.*  
[9th August 1899.]\*

BE it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :—

Provisions  
in schedule  
to be incor-  
porated in  
Electric  
Lighting  
Orders.

1. The provisions contained in the schedule to this Act shall be incorporated with and form part of every Provisional Order made by the Board of Trade after the commencement of this Act under the Electric Lighting Acts, save so far as they are expressly varied or excepted by the Order, and shall, subject to any such variations or exceptions, apply, so far as applicable to the undertaking authorised by the Order.

The said provisions shall also, with the necessary modifications, and in particular with the substitution of the words "special Act" for "special Order," be incorporated with any special Act, save so far as they are expressly varied or excepted thereby.

45 & 46 Vict.  
c. 56.  
51 & 52 Vict.  
c. 12.  
53 & 54 Vict.  
c. 13.

The expression "Electric Lighting Acts" means in this Act the Electric Lighting Acts, 1882 and 1888, and, so far as respects Scotland, the Electric Lighting Acts, 1882 and 1888, and the Electric Lighting (Scotland) Act, 1890.

The expression "special Act" means in this Act any Act passed after the commencement of this Act authorising the supply of electricity for any public or private purposes within any area.

Short title,  
extent, and  
commence-  
ment.

2.—(1.) This Act may be cited as the Electric Lighting (Clauses) Act, 1899.

---

\* For arrangement of sections see *ante*, p. 85.



(2.) Except so far as any of the provisions contained in the schedule to this Act are incorporated with any Provisional Order made by the Board of Trade under the Electric Lighting Acts extending to the county of London, or with any special Act so extending, this Act shall not apply to the county of London. Sect. 2 (2).

See the Chapter dealing with COUNTY OF LONDON, *post*, p. 308.

(3.) This Act shall come into operation on the first day of October one thousand eight hundred and ninety-nine.

### SCHEDULE.

1. The provisions of this Schedule are to be read and construed subject in all respects to the provisions of the Electric Lighting Acts, and of any other Acts or parts of Acts incorporated therewith, and those Acts and parts of Acts are in this Schedule collectively referred to as "the principal Act"; and the several words, terms, and expressions to which by the principal Act meanings are assigned, shall have in this Schedule the same respective meanings, provided that in this schedule— Interpretation.

The expression "the Special Order" means any Provisional Order made by the Board of Trade under the principal Act with which the provisions of this Schedule are incorporated and includes those provisions as so incorporated:

The expression "energy" means electrical energy, and for the purposes of applying the provisions of the principal Act to the Special Order electrical energy shall be deemed to be an agency within the meaning of electricity as defined in the Electric Lighting Act, 1882:

The definition of "electricity" in the Act of 1882, s. 82, is "electricity, electric current, or any like agency."

The expression "power" means electrical power or the rate per unit of time at which energy is supplied:

The expression "main" means any electric line which may be laid down by the Undertakers in any street or public place, and through which energy may be supplied or intended to be supplied by the Undertakers for the purposes of general supply:

The expression "service line" means any electric line through which energy may be supplied or intended to be supplied by the Undertakers to a consumer, either from any main or directly from the premises of the Undertakers:

The expression "distributing main" means the portion of any main

**Schedule.  
Sect. 1.**

which is used for the purpose of giving origin to service lines for the purposes of general supply :

The expression "general supply" means the general supply of energy to ordinary consumers, and includes, unless otherwise specially agreed with the local authority, the general supply of energy to the public lamps, where the local authority are not themselves the Undertakers, but shall not include the supply of energy to any one or more particular consumers under special agreement

The expression "area of supply" means the area within which the Undertakers are, for the time being, authorised to supply energy under the Special Order.

The expression "county council" means the county council of the county in which the area of supply is situated :

The expression "consumer" means any body or person supplied or entitled to be supplied with energy by the Undertakers :

The expression "consumer's terminals" means the ends of the electric lines situate upon any consumer's premises and belonging to him, at which the supply of energy is delivered from the service lines :

The expression "telegraphic line," when used with respect to any telegraphic line of the Postmaster-General, has the same meaning as in the Telegraph Act, 1878, and any such telegraphic line shall be deemed to be injuriously affected where telegraphic communication by means of that line is, whether through induction or otherwise, in any manner affected :

41 & 42 Vict.  
c. 76.

For definition of "telegraphic line" in the Telegraph Act, 1878, see p. 125.

The expression "railway" includes any tramroad, that is to say, any tramway other than a tramway as herein-after defined :

The expression "tramway" means any tramway laid along any street :

The expression "daily penalty" means a penalty for each day on which any offence is continued after conviction therefor :

The expression "Board of Trade regulations" means any regulations or conditions affecting the undertaking made by the Board of Trade under the principal Act or the Special Order, for securing the safety of the public, or for insuring a proper and sufficient supply of energy :

The expression "deposited map" means the map of the area of supply deposited at the Board of Trade by the Undertakers together with the Special Order, and signed by an assistant secretary to the Board of Trade :

The expression "plan" means a plan drawn to a horizontal scale of at least one inch to eighty-eight feet, and where possible a section drawn to the same horizontal scale as the plan, and to a vertical scale of at least one inch to eleven feet, or to such other scale as the Board of Trade may approve of for both plan and section, together with such detail plan and sections as may be necessary.

Schedule.  
Sect. 1.

#### PROVISIONS AS TO UNDERTAKERS.

2.—(1.) The Undertakers shall be the authority, company, or other person named for that purpose in the Special Order.

Description  
of under-  
takers.

(2.) If, in a case where the Undertakers are not the local authority, the undertaking or any part thereof is at any time purchased by the local authority in accordance with the Special Order or the principal Act the local authority shall from the date on which the purchase takes effect be the Undertakers in relation to the undertaking or part thereof for the purposes of the Special Order in lieu of the persons mentioned therein as Undertakers.

Special provisions on the above subject are made in each of the Power Acts.

3.—(1.) The Undertakers shall not purchase or acquire the undertaking of or associate themselves with any company or person supplying energy under any licence, Provisional Order, or Special Act, unless the Undertakers are authorised by Parliament to do so.

Undertakers  
not to pur-  
chase other  
undertakings.

(2.) If in contravention of this section the Undertakers purchase or acquire any such undertaking, or associate themselves with any such other company or person, the Board of Trade may, if they think fit, revoke the Special Order upon such terms as they think just.

This section is not incorporated with the Power Acts, which contain express provisions making it lawful for them to supply electrical energy in bulk to authorised distributors.

Section 11 of the Act of 1882, which authorises any local authority who have obtained a licence, order, or special Act for the supply of electricity to, *inter alia*, contract "for the supply of electricity," proceeds, "but no local authority, company, or person shall by any contract or assignment transfer to any other company or person or divest themselves of any legal powers given to them, or any legal liabilities imposed on them by this Act, or by any licence, order, or special Act, without the consent of the Board of Trade." See s. 11 and the notes thereto, *ante*, p. 105. As to purchase by a local authority from a company, see Act of 1888, s. 2, *ante*, p. 145; and as to the question of transfer from a local authority to a company, see *ante*, p. 85, and *ante*, p. 105.

**Schedule.  
Sect. 4.**

Area of  
supply and  
prohibition  
of supply  
beyond area.

**AREA OF SUPPLY.**

4.—(1.) The area of supply shall be the area named for that purpose in the Special Order.

Some of the Power Acts make special provisions on the subject of this section.

(2.) The Undertakers shall not at any time after the commencement of the Special Order supply energy or (except for the purposes of that Order) erect or lay down any electric lines or works beyond the area of supply (a) otherwise than under the authority of Parliament, or under a licence (b) granted by the Board of Trade under the principal Act.

(3.) If the Undertakers supply energy or erect or lay down electric lines or works in contravention of this section, the Board of Trade may, if they think fit, revoke the Special Order on such terms as they think just.

(a) Formerly it was not the practice of the Board of Trade to insert this prohibition in orders in favour of provincial local authorities. It must not, from this circumstance, be assumed that such local authorities are at liberty to supply energy beyond their authorised area of supply. The insertion of the prohibition was probably considered unnecessary as no money could be borrowed for the purpose without the consent of the Local Government Board. The prohibition is inserted in County of London Orders. The effect of the words "except for the purposes of that Order" is not to authorise the laying of lines outside the area of supply, but to prevent the power of revocation from operating in such a case. On the subject generally, see the evidence of the late Sir Courtenay Boyle, K.C.B., of the Board of Trade, before Lord Cross's Committee (Questions 43 *et seq.*), and the report of that Committee (*ante*, p. 55). Of late years it has become a common practice to include in special Acts of local authorities a section authorising them to supply electricity in bulk to adjoining districts. In the case of the Wolverhampton Corporation Act, 1899 (62 & 63 Vict. ch. cclix.), s. 63, power is given to supply electricity for tramway purposes or light railways within or beyond the borough. To the same effect is s. 48 of the Mansfield Corporation Act, 1901 (1 Edw. 7, ch. xcvi.); and s. 58 of the Lowestoft Corporation Act, 1901 (1 Edw. 7, ch. cclv.); s. 64 of the Southport Extension and Tramways Act, 1900 (63 & 64 Vict. ch. lxi.). There are many other instances. See *ante*, pp. 71—72.

By the Metropolis Gas Act, 1860, s. 6, the limits of each gas company then supplying the metropolis were defined, and in the result, each company enjoyed a practical monopoly in its own district. One of these companies, at the request of a railway company, placed a meter on a part of a railway station lying within the company's limits, and through it supplied gas to other parts of the premises situated outside the company's limits, and within the limits of another company. The Court of Appeal held this to be lawful, on the ground that the sale and delivery of the gas took place at the meter; but the House of Lords reversed this decision, holding that the gas was supplied where it was consumed, and therefore, that the company were

transgressing their authorised limits. *Gas Light and Coke Co. v. South Metropolitan Gas Co.*, 82 L. T. 126; 5 T. L. R. 781.

(b) There is no instance of a "licence" for the purposes referred to in the above section having been granted by the Board of Trade.

Schedule.  
Sect. 4.

NOTE.

#### SECURITY AND ACCOUNTS.

5. The following provisions shall apply as to giving security in cases where the Undertakers are not a local authority:—

Security for  
execution of  
works.

- (1.) The Undertakers within a period of six months after the commencement of the Special Order, and before exercising any of the powers conferred by that Order on them in relation to the execution of works, shall show to the satisfaction of the Board of Trade that they are in a position fully and efficiently to discharge the duties and obligations imposed upon them by that Order throughout the area of supply.
- (2.) The Undertakers shall also, within six months after the commencement of the Special Order, or within such extended period as may be approved by the Board of Trade, and before exercising any of the powers conferred on them in relation to the execution of works, deposit or secure to the satisfaction of the Board of Trade such sum as may be fixed by the Special Order, or, if not so fixed, by the Board of Trade.

This amount will vary with the magnitude of the works undertaken—generally speaking, it runs from £500 to £1,000.

- (3.) If the Undertakers fail to show to the satisfaction of the Board of Trade within any such period as aforesaid that they are in such a position as above mentioned, or fail to deposit or secure such sum as aforesaid, the Board of Trade may, after considering any representations which the local authority may make, revoke the Special Order as to the whole or, with the consent of the Undertakers, any part of the area of supply, upon such terms as they think just.
- (4.) The said sum deposited or secured by the Undertakers under the provisions of this section shall be repaid or released to them in equal moieties, when and so soon as it may be certified by an inspector (to be appointed by the Board of Trade) that amounts equal to the sums so to be repaid or released have been expended by the Undertakers upon works executed for the purposes of the undertaking, or that distributing mains have been duly laid down in accordance with the provisions of the Special Order in every street or part of a street in which they are required by that Order to lay down distributing mains within a limited time, or at such earlier dates and by such instalments as may be approved by the Board of Trade.

**Schedule.**  
**Sect. 5.**  
—

- (5.) Where the area of supply includes the districts or parts of the districts of two or more local authorities, the Board of Trade may require the deposit to be made or the security given in respect of those districts severally, and in that case the deposit or security shall be repaid or released separately as to each district.

The Board of Trade have power to revoke special orders in favour of local authorities for default in executing works or supplying energy in accordance with the provisions of the Special Order. See s. 65 of the schedule to the Electric Lighting (Clauses) Act, 1899, *post*, p. 202.

This section is generally excluded from incorporation in Power Acts.

**Audit of  
Undertakers'  
accounts.**

6. The following provisions shall apply as to the audit of accounts where the Undertakers are not a local authority (a) :—

- (1.) The annual statement of accounts of the undertaking, before being published as provided by section nine of the Electric Lighting Act, 1882, shall be examined and audited by such competent and impartial person as the Board of Trade appoint, and the remuneration of the auditor shall be such as the Board of Trade direct, and that remuneration and all expenses incurred by him in or about the execution of his duties, to such an amount as the Board of Trade approve, shall be paid by the Undertakers on demand, and shall be recoverable summarily as a civil debt.
- (2.) The Undertakers shall give to the auditor, his clerks and assistants, access to such of the books and documents relating to the undertaking as are necessary for the purposes of the audit, and shall when required furnish to him and them all vouchers and information requisite for that purpose, and shall afford to him and them all facilities for the proper execution of his and their duty.
- (3.) The Board of Trade may make and vary regulations prescribing the times at and the mode in which the audit shall be made and conducted, or otherwise for the purpose of giving effect to the provisions of this section.
- (4.) Any report made by the auditor, or such portion thereof as the Board of Trade direct, shall be appended to the annual statement of accounts, and shall form part thereof for the purposes of the said section nine.

(a) The reason why this section is confined to Undertakers not being the local authority is that s. 8 of the Act of 1882, and the schedule thereto, make special provision with regard to the audit of the accounts of local authorities. See p. 98.

45 & 46 Vict.  
c. 56.

APPLICATION OF MONEY AND PURCHASE OF LAND, ETC., BY  
LOCAL AUTHORITY.

Schedule.  
Sect. 7.

7. Where a local authority are the Undertakers the following provisions shall have effect:—

Application  
of money  
received  
by local  
authority as  
Undertakers.

- (1.) All moneys received by the Undertakers in respect of the undertaking, except (a) borrowed money, (b) money arising from the disposal of lands acquired for the purposes of the Special Order, and (c) other capital money received by them in respect of the Undertaking, shall be applied by them as follows:—
  - (a.) In payment of the working and establishment expenses and cost of maintenance of the undertaking, including all costs, expenses, penalties, and damages incurred or payable by the Undertakers consequent upon any proceedings by or against the Undertakers, their officers or servants, in relation to the undertaking;
  - (b.) In payment of the interest or dividend on any mortgages, stock, or other securities granted and issued by the Undertakers in respect of money borrowed for electricity purposes;
  - (c.) In providing any instalments or sinking fund required to be provided in respect of moneys borrowed for electricity purposes;
  - (d.) In payment of all other their expenses of executing the Special Order not being expenses properly chargeable to capital;
  - (e.) In providing a reserve fund, if they think fit, by setting aside such money as they think reasonable, and investing the money and the resulting income thereof in Government securities, or in any other securities in which trustees are by law for the time being authorised to invest other than stock or securities of the Undertakers, and accumulating it at compound interest until the fund so formed amounts to one-tenth of the aggregate capital expenditure on the undertaking.

The reserve fund shall be applicable to answer any deficiency at any time happening in the income of the Undertakers from the undertaking, or to meet any extraordinary claim or demand at any time arising against the Undertakers in respect of the undertaking, and so that if that fund is at any time reduced it may thereafter be again restored to the prescribed limit, and so on as often as the reduction happens.

The Undertakers shall carry the net surplus remaining in any year and the annual proceeds of the reserve fund when amounting to the prescribed limit, to the credit of the local

**Schedule.**  
**Sect. 7.**  
 —

rate as defined by the principal Act or at their option shall apply that surplus, or any part thereof, to the improvement of the district for which they are the local authority, or in reduction of the capital moneys borrowed for electricity purposes.

Provided always that if the surplus in any year exceed five pounds per centum per annum upon the aggregate capital expenditure on the undertaking, the Undertakers shall make such a rateable reduction in the charge for the supply of energy as in their judgment will reduce the surplus to that maximum rate of profit.

Any deficiency of income in any year when not answered out of the reserve fund shall be charged upon and payable out of the local rate.

- (2.) All moneys arising from the disposal of lands acquired by the Undertakers for the purposes of the Special Order, and all other capital moneys received by them in respect of the undertaking, shall be applied by them as follows :—
- (a.) In the reduction of the capital moneys borrowed by them for electricity purposes ;
  - (b.) In the reduction of the capital moneys borrowed by them for other than electricity purposes.

This section is excluded from incorporation in the Power Acts.

Purchase and  
 use of lands  
 by local  
 authority.

8. Where a local authority are the Undertakers the following provisions shall have effect :—

- (1.) Subject to the provisions of the Special Order and the principal Act the Undertakers may acquire by purchase or on lease and use any lands for the purposes of the Special Order, and may also for those purposes use any other lands for the time being vested in or leased by them, but subject as to the last-mentioned lands to the approval of the Local Government Board, and may dispose of any lands acquired by them under the provisions of this section which may not for the time being be required for the purposes of the Special Order : Provided that the amount of land so used by them shall not at any one time exceed in the whole five acres except with the consent of the Board of Trade.
- (2.) The Undertakers shall not purchase or acquire for the purposes of the Special Order ten or more houses which on the fifteenth day of December last before the commencement of the Special Order, or in the case of the transfer of an undertaking to a local authority before the date of the transfer, were occupied either wholly or partially by persons belonging to the labouring class as tenants or lodgers, or except with the consent of the Local Government Board, ten or more houses which were no



so occupied on the said fifteenth day of December but have been or shall be subsequently so occupied.

**Schedule.  
Sect. 8.**

- (3.) For the purposes of this section the expression "labouring class" means mechanics, artisans, labourers, and others working for wages, hawkers, costermongers, persons not working for wages, but working at some trade or handicraft without employing others except members of their own family, and persons other than domestic servants whose income does not exceed an average of thirty shillings a week, and the families of any of those persons who may be residing with them.

This section is excluded from incorporation in the Power Acts.

9. Where a local authority are the Undertakers section two hundred and sixty-five of the Public Health Act, 1875, shall be incorporated with the Special Order, and in the construction of that section "this Act" shall not mean the Public Health Act, 1875, but shall mean the principal Act and the Special Order, and the "local authority" shall mean the local authority as such Undertakers.

Incorporation of  
38 & 39 Vict.  
c. 55, s. 265.

The section incorporated provides for the protection of members of the local authority, their officers, and other persons acting under their direction from personal responsibility. As regards the county of London the corresponding section is s. 121 of the Public Health (London) Act, 1891. See further, the Public Authorities Protection Act, 1893, *ante*, p. 50.

#### NATURE AND MODE OF SUPPLY.

10. Subject to the provisions of the Special Order and the principal Act, the Undertakers may supply energy within the area of supply for all public and private purposes as defined by the said Act, provided as follows:—

Systems and  
mode of  
supply.

- (a.) The energy shall be supplied only by means of some system approved in writing by the Board of Trade, and subject to the Board of Trade regulations (a); and
- (b.) The Undertakers shall not, without the express consent of the Board of Trade, and, where the local authority are not themselves the Undertakers of the local authority also, place any electric line above ground except within premises in the sole occupation or control of the Undertakers, and except so much of any service line as is necessarily so placed for the purpose of supply (b); and
- (c.) The Undertakers shall not permit any part of any circuit to be connected with earth (c) except so far as may be necessary for carrying out the provisions of the Board of Trade regulations, unless the connexion is for the time being approved by the Board of Trade, with the concurrence of the Postmaster-

**Schedule.  
Sect. 10.**

General, and is made in accordance with the conditions, if any, of that approval.

(a) The Board of Trade Regulations will be found *post*, p. 248. See note to s. 6, *ante*, p. 14.

(b) See s. 14 of the Act of 1882, *ante*, p. 109, and notes thereto. In County of London Orders, the consent of the County Council and of the Board of Trade is required. In some of the Power Acts it is provided that in the case of rural authorities their consent shall not be unreasonably withheld, the Board of Trade being authorised to decide any difference. See *ante*, pp. 80 and 110—112.

(c) The Board of Trade Regulations (see p. 248) permit connection with earth in certain definite and limited particulars. See the following sections of the Regulations :—

- A. (6). *Specification of insulating material.*
- A. (8). *Maintenance of the insulation.*
- A. (11). *Quick-acting cut-off for high-pressure lines, etc.*
- A. (17). *Supports, construction and erection of.*
- A. (29). *Electric continuity of metal conduits, pipes, and casings.*
- A. (32). *High-pressure lines laid above ground.*
- A. (39). *Treatment of electric lines and apparatus on consumers' premises.*
- A. (40). *Transformers and high-pressure apparatus to be enclosed in metal, etc.*

The phrase "efficiently connected with earth" used in the above specified sections is defined by the Regulations as follows :—

"Where these Regulations require any metallic body to be 'efficiently connected with earth' it shall be connected with the general mass of earth in such manner as will insure at all times an immediate and safe discharge of electrical energy."

As to the Regulations made under s. 4 of the Electric Lighting Act, 1888, see p. 261.

In the Report of the Joint Committee of the House of Lords and House of Commons in 1898, presided over by Lord Cross, the Committee report under the heading of "Provisional Orders":—

"The ordinary clause which forbids any connexion with the earth, except with the approval of the Board of Trade and the concurrence of the Postmaster-General, should be inserted in every case."

Extra high pressure.

Regulations have been made by the Board of Trade in many special cases in regard to the use of extra high pressure.

**WORKS.**

Additional provisions as to works.

11. The provisions of the Special Order as to works shall be in addition but subject to those of the principal Act, and in particular those of the Gasworks Clauses Act, 1847, with respect to breaking up streets, incorporated in the principal Act and set out in the Appendix to this Schedule.

As to the meaning of the "principal Act," s. 1 of the Schedule (see p. 155) provides that "the provisions of this schedule are to be read and construed

subject in all respects to the provisions of the Electric Lighting Acts, and of any other Acts or parts of Acts incorporated therewith, and those Acts and parts of Acts are in this schedule collectively referred to as 'the principal Act' . . ."

**Schedule.**  
**Sect. 11.**

NOTE.

The clauses of the Gasworks Clauses Act, 1847, here referred to are set out *post*, p. 212.

12.—(1.) Subject to the provisions of the principal Act and the Special Order, the Undertakers may exercise all or any of the powers conferred on them by that Act and Order, and may break up such streets not repairable by the local authority and such railways and tramways (if any) as they are specially authorised to break up by the Special Order (*a*), so far as those streets, railways, and tramways may for the time being be included in the area of supply, and be, or be upon, land dedicated to public use: Provided, however, as respects any such railway, that the powers hereby granted shall extend only to such parts thereof as pass across or along any highway on the level.

Powers for  
execution  
of works.

(2.) Nothing in the Special Order shall authorise or empower the Undertakers to break up or interfere with any street or part of a street not repairable by the local authority or any railway or tramway, except such streets, railways or tramways (if any), or such parts thereof, as they are specially authorised to break up by the Special Order, without the consent of the authority, company, or person, by whom that street, railway, or tramway is repairable, or of the Board of Trade under section thirteen (*b*) of the Electric Lighting Act, 1882, and where the Board of Trade give that consent, the provisions of the Special Order shall apply to the street, railway, or tramway to which the consent relates as if the Undertakers had been specially authorised to break it up by that Order.

(*a*) See s. 15, *post*, p. 170.

(*b*) See *ante*, p. 108.

Some of the Power Acts contain the following section :—

"The provisions of section 18 of the Electric Lighting Act, 1882, and of section 12 of the schedule to the Electric Lighting (Clauses) Act, 1899, restricting the breaking up of tramways or railways where laid across or along any highway on the level or the roadway of or approaches to any bridge over any railway within the area of supply shall not apply to the company."

See the Chapter on the Power Acts, *post*, p. 488.

By agreement the telegraphs of the Postmaster-General, or his licensee, may be placed "in the trenches, tubes, pipes, or apparatus" of an electric "company or person." See *ante*, p. 108. By the Interpretation Act, 1889, s. 19, the expression "person" shall, unless the contrary intention appears, include any body of persons corporate or unincorporate.

13.—(1.) Subject to the provisions of the principal Act, and the Special Order, and the Board of Trade regulations, the Undertakers

Street boxes.

**Schedule.**  
**Sect. 13.**  
 —

may construct in any street such boxes (a) as may be necessary for purposes in connexion with the supply of energy, including apparatus for the proper ventilation of the boxes: Provided that, where the local authority are not themselves the Undertakers, no such box or apparatus shall be placed above ground, except with the consent of the authority, body, or person, by whom the street is repairable.

(2) Every such box shall be for the exclusive use of the Undertakers and under their sole control, except so far as the Board of Trade otherwise order, and shall be used by the Undertakers only for the purpose of leading off service lines and other distributing conductors, or for examining, testing, regulating, measuring, directing, or controlling, the supply of energy, or for examining or testing the condition of the mains or other portions of the works, or for other like purposes connected with the undertaking, and the Undertakers may place therein meters, switches, and any other suitable and proper apparatus, for any of the above purposes.

(3.) Every such box, including the upper service or covering thereof, shall be constructed of such materials, and shall be constructed and maintained by the Undertakers in such manner, as not to be a source of danger, whether by reason of inequality of service or otherwise.

(4.) Where the local authority are not themselves the Undertakers, they may, with the approval of the Board of Trade (b), prescribe the hours during which the Undertakers are to have access to the boxes, and if the Undertakers during any hours not so prescribed remove or displace or keep removed or displaced the upper surface or covering of any box without the consent of the local authority (b), they shall be liable for each offence to a penalty not exceeding five pounds, and to a daily penalty not exceeding five pounds: Provided that the Undertakers shall not be subject to any such penalties as aforesaid if the court are of opinion that the case was one of emergency, and that the Undertakers complied with the requirements of this section so far as was reasonable under the circumstances.

(a) With respect to the construction of street boxes see Regulation 34 at p. 250, and Regulation 37 at p. 268, and as to transforming stations see Regulation 35, p. 250.

(b) In County of London Orders the County Council take the place of the local authority where the street is repairable by the County Council.

A local authority authorised to supply electric light were summoned by the district surveyor under the London Building Act, 1894, for constructing street boxes or chambers under a street for the purpose of electric lighting without serving the notice required under that Act. For the local authority it was contended that the Act did not apply, their special Act of 1892 being inconsistent with the enactments in the Building Act. The magistrate held that the Acts were not inconsistent, and imposed a fine of 1s. and £10 10s. costs. He also held that the street boxes were "buildings, structures, or

**Schedule.  
Sect. 13.****NOTE.**

works " within the Building Act. *Whitechapel B. of W. v. Crow* (1901), 84 L. T. 595. In a later case a similar summons was taken out by the district surveyor against the Charing Cross and Strand Electricity Supply Corporation, Limited. At the hearing the magistrate convicted, and declined to state a case, following *R. v. Shiel* (1900), 82 L. T. 587. The Divisional Court granted a rule *nisi* for a special case (*Electrician*, February 14th, 1902, p. 667; *El. Rev.*, February 14th, 1902, p. 254), and on the argument cause was shown on behalf of the magistrate as well as of the district surveyor. The rule was made absolute. A special case was duly stated, but has not yet come on for argument.

A company duly authorised by provisional order confirmed by Parliament sought to excavate and construct certain large chambers under the streets for the purpose of containing apparatus for transforming the electric current from high to low pressure. The chambers proposed to be used were 10 feet deep, 7 feet 6 inches long, and 5 feet 6 inches wide. The local authority contended that these were not "boxes" within the meaning of the provisional order, and further, that they could not be used for the purpose of holding transformers. *STIRLING, J.*, refused to grant an injunction. *Wandsworth District Board of Works v. County of London and Brush Provincial Electric Lighting Co.*, *Journal of Gas Lighting*, August 18th, 1895, vol. lxvi., p. 845.

In two cases of faculty, it appeared that for the purpose of lighting two districts in the City of London with electric light, it was necessary that underground chambers should be constructed in two closed churchyards in the districts, there being no other places suitable for their construction, and that it was in the interest of the parishioners and public that electric light should be introduced into the districts. *Held*, that the court had jurisdiction in its discretion to decree a faculty on each case authorising the construction of such a chamber in the churchyard, and the use of the same as a transformer chamber, for the term of twenty-one years, subject to payment of a yearly rent to the rector and churchwardens of the parish. A local Act of Parliament provided that part of the parish church of St. Benet Fink, in the City of London, and one-third part of the burial-ground of that parish, might be taken for the purposes of the Act after notice, and should be vested in the Corporation of the City of London, on such payment being made as in the Act mentioned. By a subsequent local Act it was provided that, on complying with certain directions therein contained, the Corporation might take down the parish church of St. Benet Fink, or the part thereof not taken down under the last-mentioned Act, and the site thereof, and the ground soil thereof, and also the then present burial-ground of the said parish, and the freehold of the same in fee simple should be vested in the Corporation free from all trusts and incumbrances whatsoever; and that as soon as the site of the said church and the said burial-ground should be cleared, such portion of the same as was not otherwise appropriated under the Act, should remain for ever unbuilt upon, and unappropriated to any purpose except such ornamental purpose as the Corporation, with the consent of the Bishop of London, might direct. After the provisions of these Acts as to the vesting of the churchyard of St. Benet Fink had become operative, the Corporation of the City of London and the rector of the united parish of St. Peter-le-Poer with St. Benet Fink, and the churchwardens of St. Benet Fink, petitioned the court to decree a faculty for the construction in the churchyard of St. Benet Fink of an underground chamber to be used for the transformation of electricity.

**Schedule.**  
**Sect. 13.**

—  
**NOTE.**

Notice of works, with plan, to be served on Postmaster-General and local authority.

*Held*, that the court was not precluded by the local Acts relating to the churchyard from granting the faculty prayed for. *In re St. Nicholas Cole Abbey; in re St. Benet Fink Churchyard*, [1898] P. 58.

**14.—(1.)** Where the exercise of any of the powers of the Undertakers in relation to the execution of any works (including the construction of boxes) will involve the placing of any works in, under, along or across any street or public bridge, the following provisions shall have effect :—

(a.) One month before commencing the execution of the works (not being repairs, renewals, or amendments of existing works of which the character and position are not altered), the Undertakers shall serve a notice upon the Postmaster-General and the local authority describing the proposed works, together with a plan (a) of the works showing the mode and position in which the works are intended to be executed, and the manner in which it is intended that the street or bridge, or any sewer, drain, or tunnel, therein or thereunder, is to be interfered with, and shall, upon being required to do so by the Postmaster-General or the local authority, give him or them any such further information in relation thereto as he or they desire.

No part of the month of August shall be included in calculating the above-mentioned period of one month (b).

- (b.) The Postmaster-General or the local authority may, in his or their discretion, approve (c) any such works or plan, subject to such amendments or conditions as may seem fit, or may disapprove them, and may give notice of that approval or disapproval to the Undertakers.
- (c.) Where the Postmaster-General or the local authority approve any such works or plan, subject to any amendments or conditions with which the Undertakers are dissatisfied, or disapprove any such works or plan, the Undertakers may appeal to the Board of Trade, and the Board of Trade may inquire into the matter, and allow or disallow the appeal, and may approve any such works or plan, subject to such amendments or conditions as seem fit, or may disapprove them.
- (d.) If the Postmaster-General or the local authority fail to give any such notice of approval or disapproval to the Undertakers within one month after the service of the notice upon them, he or they shall be deemed to have approved the works and plan.
- (e.) Notwithstanding anything in the Special Order or the principal Act, the Undertakers shall not be entitled to execute any such works as above specified, except so far as they may be of a description and in accordance with a plan which has been approved, or is to be deemed to have been approved, by the

Schedule.  
Sect. 14.  
—

Postmaster-General and the local authority, or by the Board of Trade, as above mentioned ; but where any such works, description, and plan are so approved, or to be deemed to be approved, the Undertakers may cause those works to be executed in accordance with the description and plan, subject in all respects to the provisions of the Special Order and the principal Act.

- (f.) If the Undertakers make default in complying with any of the requirements or restrictions of this section, they shall (in addition to any other compensation which they may be liable to make under the provisions of the Special Order or the principal Act) make full compensation to the Postmaster-General and the local authority for any loss or damage which he or they may incur by reason thereof, and in addition thereto they shall be liable for each default to a penalty not exceeding ten pounds, and to a daily penalty not exceeding five pounds : Provided that the Undertakers shall not be subject to any such penalty as aforesaid if the court are of opinion that the case was one of emergency, and that the Undertakers complied with the requirements of this section so far as was reasonable under the circumstances.

(2.) In the application of this section to a street or public bridge (not within a county borough) which is repairable by the county council, a reference to the county council shall be substituted for a reference to the local authority.

(3.) In the application of this section within any area where the Undertakers are the local authority, the reference to the local authority and to sewers, drains, or tunnels in or under streets or bridges shall not apply, except so far as a reference to the county council is substituted for a reference to the local authority.

(4.) Nothing in this section shall exempt the Undertakers from any penalty or obligation to which they may be liable under the Special Order or otherwise by law in the event of any telegraphic line of the Postmaster-General being at any time injuriously affected by the Undertakers' works or their supply of energy.

(a) "Plan" is defined by s. 1 of the schedule (*ante*, p. 157) to mean "a plan drawn to a horizontal scale of at least one inch to eighty-eight feet, and where possible a section drawn to the same horizontal scale as the plan and to a vertical scale of at least one inch to eleven feet, or to such other scale as the Board of Trade may approve of for both plan and section, together with such detail plan and sections as may be necessary." As to the particulars which ought to be shown, see *Edgware Highway Board v. Colne Valley Water Company* (1877), 46 L. J. Ch. 889; and *East Molesey Local Board v. Lambeth Waterworks Co.*, [1892] 3 Ch. 289, referred to more fully in the notes to s. 9 of the Gasworks Clauses Act, 1847, *post*, p. 225.

(b) It has not been usual heretofore to insert this provision in orders in favour of local authorities.

**Schedule.** (c) As to what is an "approved" plan see *Yabbicom v. King*, cited  
**Sect. 14.** p. 226.

**NOTE.**

As regard the Power Companies, their special Acts will have to be looked at for any modifications of the provisions contained in this section. See, e.g., the Yorkshire Act, s. 41, and the North Metropolitan Act, s. 41, Derbyshire and Nottinghamshire Act, s. 87.

Three of the Power Acts (South Wales, Clyde, and Loch Leven) contain this special enactment (s. 2)—

"The provisions of section 14 of the schedule to the Electric Lighting (Clauses) Act, 1899, shall extend and apply to the laying down and placing of any cables or other works in, through, under, along, or across the bed and foreshore of any river."

As to streets not repairable by local authority, railways, tramways, and canals.

**15.** Where the exercise of the powers of the Undertakers in relation to the execution of any works will involve the placing of any works in, under, along, or across any street or part of a street not repairable by the local authority, including, where the area of supply is not wholly in a county borough, the county council, or over or under any railway, tramway, or canal, the following provisions shall have effect unless otherwise agreed between the parties interested :—

- (a.) One month before commencing the execution of the works (not being repairs, renewals, or amendments of existing works of which the character and position are not altered) the Undertakers shall, in addition to any other notices which they may be required to give under the Special Order, or the principal Act, serve a notice upon the body or person liable to repair the street or part of a street, or the body or person for the time being entitled to work the railway or tramway, or the owners of the canal (as the case may be), in this section referred to as the "owners," describing the proposed works, together with a plan of the works showing the mode and position in which the works are intended to be executed and placed, and shall, upon being required to do so by any such owners, give them any such further information in relation thereto as they desire.
- (b.) Every such notice shall contain a reference to this section, and direct the attention of the owners to whom it is given to the provisions thereof.
- (c.) Within three weeks after the service of any such notice and plan upon any owners, those owners may, if they think fit, serve a requisition upon the Undertakers requiring that any question in relation to the works, or to compensation in respect thereof, and any other question arising upon the notice or plan, shall be settled by arbitration; and thereupon that question, unless settled by agreement, shall be determined by arbitration accordingly.
- (d.) In settling any question under this section an arbitrator shall have regard to any duties or obligations which the owners may



be under in respect of the street, railway, tramway, or canal, and may, if he thinks fit, require the Undertakers to execute any temporary or other works so as to avoid any interference with any traffic, so far as may be possible.

- (e.) Where no such requisition as in this section mentioned is served upon the Undertakers, or where after any such requisition has been served upon them any question required to be settled by arbitration has been so settled, the Undertakers may, upon paying or securing any compensation which they may be required to pay or secure, cause to be executed the works specified in such notice and plan as aforesaid, and may repair, renew, and amend them (provided that their character and position are not altered), but subject in all respects to the provisions of the Special Order and the principal Act, and only in accordance with the notice and plan so served by them as aforesaid, or such modifications thereof respectively as may have been determined by arbitration as herein-before mentioned, or as may be agreed upon between the parties.
- (f.) All works to be executed by the Undertakers under this section shall be carried out to the reasonable satisfaction of the owners, and those owners shall have the right to be present during the execution of the works.
- (g.) Where the repair, renewal, or amendment of any existing works, of which the character or position is not altered, will involve any interference with any railway or with any tramway over or under which those works have been placed, the Undertakers shall, unless it is otherwise agreed between the parties, or in cases of emergency, give to the owners not less than twenty-four hours' notice before commencing to effect the repair, renewal, or amendment, and the owners shall be entitled by their officer to superintend the works, and the Undertakers shall conform to such reasonable requirements as may be made by the owners or that officer. The notice shall be in addition to any other notices which the Undertakers may be required to give under the Special Order or the principal Act.
- (h.) If the Undertakers make default in complying with any of the requirements or restrictions of this section they shall (in addition to any other compensation which they may be liable to make under the provisions of the Special Order or the principal Act) make full compensation to the owners affected thereby for any loss or damage which they may incur by reason thereof, and in addition thereto they shall be liable for each default to a penalty not exceeding ten pounds, and to a daily penalty not exceeding five pounds: Provided that the Undertakers shall not be subject to any such penalty as aforesaid, if the court are of opinion that the case was one of

**Schedule.**  
**Sect. 15.**

emergency, and that the Undertakers complied with the requirements of this section, so far as was reasonable under the circumstances.

By Rule XI., *post*, p. 288, a list of the streets not repairable by the local authority, and of the railways and tramways (if any) which the applicants propose to take powers to break up, must be deposited at the Board of Trade along with the memorial for the provisional order. By Rule XIII. the notice by advertisement must contain particulars of the same. (See p. 289; see also s. 12, *ante*, p. 165.)

Street authority, etc., may give notice of desire to break up streets, etc., on behalf of Undertakers.

**16.** Any body or person for the time being liable to repair any street or part of a street (a), or entitled to work any railway or tramway which the Undertakers are empowered to break up for the purposes of the Special Order, may, if they think fit, serve a notice upon the Undertakers stating that they desire to exercise or discharge all or any part of any of the powers or duties of the Undertakers as therein specified in relation to the breaking up, filling in, re-instating, or making good any streets, bridges, sewers, drains (b), tunnels, or other works vested in or under the control or management of that body or person, and may amend or revoke any such notice by another notice similarly served.

Where any such body or person (in this section referred to as the "givers of the notice") have given notice that they desire to exercise or discharge any such specified powers and duties of the Undertakers, then so long as that notice remains in force the following provisions shall have effect, unless it is otherwise agreed between the parties interested :—

- (a.) The Undertakers shall not be entitled to proceed themselves to exercise or discharge any such specified powers or duties as aforesaid, except where they have required the givers of the notice to exercise or discharge those powers or duties, and the givers of the notice have refused or neglected to comply with that requisition, as herein-after provided, or in cases of emergency.
- (b.) In addition to any other notices which they are required to give under the provisions of the Special Order or the principal Act, the Undertakers shall, not more than four days and not less than two days before the exercise or discharge of any such powers or duties so specified as aforesaid is required to be commenced, serve a requisition upon the givers of the notice, stating the time when that exercise or discharge is required to be commenced, and the manner in which any such powers or duties are required to be exercised or discharged.
- (c.) Upon receipt of any such requisition as last aforesaid, the givers of the notice may proceed to exercise or discharge any such powers or duties as required by the Undertakers, subject to

the like restrictions and conditions, so far as they are applicable, as the Undertakers would themselves be subject to in that exercise or discharge.

**Schedule.  
Sect. 16.**

- (d.) If the givers of the notice decline or, for twenty-four hours after the time when any such exercise or discharge of any powers or duties is by any requisition required to be commenced, neglect to comply with the requisition, the Undertakers may themselves proceed to exercise or discharge the powers or duties therein specified in like manner as they might have done if such notice as aforesaid had not been given to them by the givers of the notice.
- (e.) In any case of emergency the Undertakers may themselves proceed at once to exercise or discharge so much of any such specified powers or duties as aforesaid as may be necessary for the actual remedying of any defect from which the emergency arises without serving any requisition on the givers of the notice ; but in that case the Undertakers shall, within twelve hours after they begin to exercise or discharge such powers or duties as aforesaid, give information thereof in writing to the givers of the notice.
- (f.) If the Undertakers exercise or discharge any such specified powers or duties as aforesaid otherwise than in accordance with the provisions of this section, they shall be liable for each offence to a penalty not exceeding ten pounds, and to a daily penalty not exceeding five pounds : Provided that the Undertakers shall not be subject to any such penalties as aforesaid if the court are of opinion that the case was one of emergency, and that the Undertakers complied with the requirements of this section so far as was reasonable under the circumstances.
- (g.) All expenses properly incurred by the givers of the notice in complying with any requisition of the Undertakers under this section shall be repaid to them by the Undertakers, and may be recovered summarily.
- (h.) The givers of the notice may, if they think fit, require the Undertakers where the local authority are not themselves the Undertakers, to give them such security for the repayment to them of any expenses incurred or to be incurred by them under this section as may be determined in manner provided by this schedule. If the Undertakers fail to give any such security within seven days after being required to do so, or in case of difference after the difference has been determined by a court of summary jurisdiction, they shall not be entitled to serve any further requisition upon the givers of the notice requiring them to exercise or discharge any powers or duties under this section until the security has been duly given.

**Schedule.  
Sect. 16.**

Provided that nothing in this section shall in any way affect the rights of the Undertakers to exercise or discharge any powers or duties conferred or imposed upon them by the Special Order or the principal Act in relation to the execution of any works beyond the actual breaking up, filling in, reinstating or making good any such street or part of a street, or any such bridges, sewers, drains, tunnels, or other works, or railway or tramway as in this section mentioned.

(a) In County of London Orders the words "or liable to repair any sewer, subway, or work" are inserted.

(b) In County of London Orders the word "subways" is inserted.

As to notices  
under s. 16  
of schedule to  
Act of 1899.

Some of the Power Acts contain the following:—

"A notice served upon the Company under section 16 of the schedule to the Electric Lighting (Clauses) Act, 1899, shall be of no effect, unless it be served within the period prescribed by this section (that is to say):

"In the case of a notice stating that the givers of the notice desire to exercise or discharge all or any part of the powers or duties of the undertakers within one month from the service by the undertakers of the notice prescribed by s. 14 or s. 15 of the said schedule as the case may be; and

"In the case of a notice amending or revoking any such first-mentioned notice within fourteen days from the service of such first-mentioned notice."

*See, e.g.,* County of Durham Act, 1900, s. 41, and North Metropolitan Act, 1900, s. 41.

A road authority having given notice under this section of their desire to do the work of reinstating certain streets, commenced the work of reinstatement, but were stopped by frost. The plaintiff having sustained personal injury through the non-repair of the street, it was held in the Epsom County Court that the road authority, and not the Electric Lighting Co., were responsible for the injury sustained. *Fidler v. Electrical Power Distribution Co., Limited.*, *El. Rev.*, July 25th, 1902, p. 189. Cf. the following cases decided under ss. 28 and 29 of the Tramways Act, 1870: *Howitt v. Nottingham Tramways Co.* (1888), 12 Q. B. D. 16; *Aldred v. West Metropolitan Tramways Co.*, [1891] 2 Q. B. 898; *Barnett v. Poplar Mayor, &c.*, [1901] 2 K. B. 819.

As to altera-  
tion of pipes,  
wires, etc.,  
under streets.

17. The Undertakers may alter (a) the position of any pipes (except in a case where the local authority are not themselves the Undertakers, any pipe forming part of any sewer of the local authority (b)), or any wires being under any street or place authorised to be broken up by them, which may interfere with the exercise of their powers under the principal Act or the Special Order; and any body or person may in like manner alter the position of any electric lines or works of the Undertakers, being under any such street or place as aforesaid, which may interfere with the lawful exercise of any powers vested in that body

or person in relation to that street or place (c), subject to the following provisions, unless it is otherwise agreed between the parties interested :—

**Schedule.  
Sect. 17.**

- (a.) One month before commencing any such alterations the Undertakers, or the body or person (as the case may be), in this section referred to as the "operators," shall serve a notice upon the body or person for the time being entitled to the pipes, wires, electric lines, or works (as the case may be), in this section referred to as the "owners," describing the proposed alterations, together with a plan showing the manner in which it is intended that the alterations shall be made, and shall, upon being required to do so by any such owners, give them any such further information in relation thereto as they may desire.
- (b.) Within three weeks after the service of any such notice and plan upon any owners those owners may, if they think fit, serve a requisition upon the operators requiring that any question in relation to the works or to compensation in respect thereof or any other question arising upon such notice or plan as aforesaid shall be settled by arbitration; and thereupon that question, unless settled by agreement, shall be determined by arbitration accordingly.
- (c.) In settling any question under this section an arbitrator shall have regard to any duties or obligations which the owners may be under in respect of the pipes, wires, electric lines, or works, and may, if he thinks fit, require the operators to execute any temporary or other works, so as to avoid interference with any purpose for which the pipes, wires, electric lines, or works are used so far as possible.
- (d.) Where no such requisition as in this section mentioned is served upon the operators, the owners shall be held to have agreed to the notice or plan served on them as aforesaid, and in that case, or where, after any such requisition has been served upon them, any question required to be settled by arbitration has been so settled, the operators, upon paying or securing any compensation which they may be required to pay or secure, may cause the alterations specified in such notice and plan as aforesaid to be made, but subject in all respects to the provisions of the principal Act and the Special Order, and only in accordance with the notice and plan so served by them as aforesaid, or such modifications thereof respectively as may have been determined by arbitration as herein-before mentioned or as may be agreed upon between the parties.
- (e.) At any time before any operators are entitled to commence any such alterations as aforesaid, the owners may serve a statement upon the operators stating that they desire to execute the

**Schedule  
Sect. 17.**  
—

alterations themselves, and where any such statement has been served upon the operators, they shall not be entitled to proceed themselves to execute the alterations, except where they have notified to the owners that they require them to execute the alterations, and the owners have refused or neglected to comply with the notification as herein-after provided.

- (f.) Where any such statement as last aforesaid has been served upon the operators, they shall, not more than forty-eight hours and not less than twenty-four hours before the execution of the alterations is required to be commenced, serve a notification upon the owners stating the time when the alterations are required to be commenced, and the manner in which the alterations are required to be made.
- (g.) Upon receipt of any such notification as last aforesaid, the owners may proceed to execute the alterations as required by the operators, subject to the like restrictions and conditions, so far as they are applicable, as the operators would themselves be subject to in executing the alterations.
- (h.) If the owners decline or, for twenty-four hours after the time when any such alterations are required to be commenced, neglect to comply with the notification, the operators may themselves proceed to execute the alterations in like manner as they might have done if no such statement as aforesaid had been served upon them.
- (i.) All expenses properly incurred by any owners in complying with any notification of any operators under this section shall be repaid to them by the operators, and may be recovered summarily.
- (j.) Any owners may, if they think fit, by any statement served by them under this section upon any operators, not being (a) a local authority, require the operators to give them such security for the repayment to them of any expenses to be incurred by them in executing any alterations as above mentioned as may be determined in manner provided by the Special Order, and where any operators have been so required to give security, they shall not be entitled to serve a notification upon the owners requiring them to execute the alterations until the security has been duly given.
- (k.) If the operators make default in complying with any of the requirements or restrictions of this section they shall (in addition to any other compensation which they may be liable to make under the provisions of the Special Order or the principal Act) make full compensation to the owners affected thereby for any loss, damage, or penalty which they may incur by reason thereof, and in addition thereto they shall be liable for each default to a penalty not exceeding ten pounds, and to a daily

penalty not exceeding five pounds : Provided that the operators shall not be subject to any such penalty as aforesaid if the court are of opinion that the case was one of emergency, and that the operators complied with the requirements of this section so far as was reasonable under the circumstances.

Schedule.  
Sect. 17.

(a) This section furnishes the machinery in detail for carrying out the powers conferred by s. 15 of the Electric Lighting Act, 1882. See *ante*, p. 118.

(b) In County of London Orders words are here inserted to protect pipes forming part of any sewer of the County Council.

(c) By s. 149 of the Public Health Act, 1875 (38 & 39 Vict. c. 55), all streets repairable by the inhabitants at large within any urban district are vested in the local authority, and they are given power from time to time to cause the soil of any such street to be raised, lowered, or altered, as they may think fit. As to this latter power, see *Southwark and Vauxhall Water Co. v. Wandsworth Dist. B. of W.*, [1898] 2 Ch. 608.

(d) In County of London Orders the words "the County Council or" are here inserted.

18.—(1.) Where the undertakers require to dig or sink any trench for laying down or constructing any new electric lines (other than service lines) or other works near to which any sewer, drain, watercourse, defence, or work under the jurisdiction or control of the local authority (a), or any main, pipe, syphon, electric line, or other work belonging to any gas, electric supply, or water company has been lawfully placed, or where any gas or water company require to dig or sink any trench for laying down or constructing any new mains or pipes (other than service pipes) or other works near to which any lines or works of the Undertakers have been lawfully placed, the Undertakers or the gas or water company (as the case may be), in this section referred to as the "operators," shall, unless it is otherwise agreed between the parties interested, or in case of sudden emergency, give to the local authority (b), or to the gas, electric supply, or water company, or to the Undertakers (as the case may be), in this section referred to as the "owners," not less than three days' notice (c) before commencing to dig or sink such trench as aforesaid, and those owners shall be entitled by their officer to superintend the work, and the operators shall conform with such reasonable requirements as may be made by the owners or the officer for protecting from injury every such sewer, drain, watercourse, defence, main, pipe, syphon, electric line, or work, and for securing access thereto, and they shall also, if required by the owners thereof, repair any damage that may be done thereto (d).

Laying of  
electric lines,  
etc., near  
sewers, etc.,  
or gas or  
water pipes,  
or other  
electric lines.

(2.) Where the operators find it necessary to undermine but not alter the position of any pipe, electric line, or work, they shall temporarily support it in position during the execution of their works, and before completion provide a suitable and proper foundation for it where so undermined.

**Schedule.**  
**Sect. 18.**

(3.) Where the operators (being the Undertakers) lay any electric line, crossing or liable to touch any mains, pipes, lines, or services belonging to any gas, electric supply, or water company, the conducting portion of the electric line shall be effectively insulated in a manner approved by the Board of Trade ; and the Undertakers shall not, except with the consent of the gas, electric supply, or water company, as the case may be, and of the Board of Trade, lay their electric lines so as to come into contact with any such mains, pipes, lines, or services, or, except with the like consent, employ any such mains, pipes, lines, or services as conductors for the purposes of their supply of energy.

(4.) Any question or difference which may arise under this section shall be determined by arbitration.

(5.) If the operators make default in complying with any of the requirements of this section they shall make full compensation to all owners affected thereby for any loss, damage, penalty, or costs which they may incur by reason thereof ; and in addition thereto they shall be liable for each default to a penalty not exceeding ten pounds, and to a daily penalty not exceeding five pounds : Provided that the operators shall not be subject to any such penalty if the court are of opinion that the case was one of emergency, and that the operators complied with the requirements of this section so far as was reasonable under the circumstances, or that the default in question was due to the fact that the operators were ignorant of the position of the sewer, drain, water-course, defence, main, pipe, syphon, electric line, or work affected thereby, and that that ignorance was not owing to any negligence on the part of the operators.

(6.) For the purposes of this section the expression "gas company" shall mean any body or person lawfully supplying gas ; the expression "water company" shall mean any body or person lawfully supplying water or water power ; and the expression "electric supply company" shall mean any body or person supplying energy in pursuance of the principal Act but not in pursuance of the Special Order.

(7.) Where the local authority are themselves the Undertakers, the references in this section to the local authority, and to sewers, drains, watercourses, defences, or works under the jurisdiction or control of that local authority, shall not apply.

(a) See sub-s. (7). In County of London Orders the County Council takes the place in this section of the local authority.

(b) See note (a).

(c) County of London Orders provide for *fourteen* days' notice instead of three.

(d) County of London Orders confer on owners power to do the work themselves at the expense of the "operators." The following is the form in use (coming after sub-s. 2) :

The owners upon giving notice to the Undertakers during the fourteen days hereinbefore referred to of their desire to execute any



work to which the provisions of this section apply may themselves execute the same and in case they give such notice they shall execute such work with due care and diligence and shall be subject to the like restrictions and conditions as the operators would themselves be subject to in respect of the same and the reasonable costs of executing such works shall be repaid by the operators to the owners. Provided always that the provisions of this paragraph shall not apply where the Undertakers are themselves lawfully entitled to exercise the powers of any owners with respect to the breaking up and reinstating of any street, nor so long as any like notice from the county council the local authority or other body or person under the provisions of the section of this order whereof the marginal note is "Street authority, etc. may give notice of desire to break up streets, etc. on behalf of undertakers" remains in force.

Provided always that when the Undertakers or any gas company desire to lay a service pipe or line to a house or premises already connected by a service pipe or line with the works of the gas company or the Undertakers as the case may be forty-eight hours' notice shall be given by the Undertakers or the gas company as the case may be to the other of them and in that case the provisions of this section so far as applicable shall then apply to such service pipes or lines accordingly. See, *e.g.*, the Marylebone Electric Lighting Order, 1901 (confirmed by 1 Edw. 7, ch. cxxxvii.), s. 16, and the Lewisham Electric Lighting Order, 1901 (confirmed by 1 Edw. 7, ch. clxxviii.), s. 17.

See Board of Trade Regulation A. 28, *post*, p. 249.

The above section is one of those which are incorporated with Power Acts. In some of these Acts it is provided that the expression "electric supply company shall include any local authority supplying or using electrical energy for any purpose."

**19.** In the exercise of any of the powers of the Special Order relating to the execution of works, the Undertakers shall not in any way injure the railways, tunnels, arches, works, or conveniences belonging to any railway or canal company, nor obstruct or interfere with the working of the traffic passing along any railway or canal.

For protection of railway and canal companies.

See s. 16 of the Electric Lighting Act, 1882, *ante*, p. 114.

**20.—(1.)** The Undertakers shall take all reasonable precautions in constructing, laying down, and placing their electric lines and other works of all descriptions, and in working their undertaking so as not injuriously to affect, whether by induction or otherwise, the working of any wire or line used for the purpose of telegraphic, telephonic, or electric signalling communication, or the currents in that wire or line, whether that wire or line be or be not in existence at the time of the laying down or placing of the electric lines or other works.

For protection of telegraphic and telephonic wires.

If any question arises between the Undertakers and the owner of any such wire or line as to whether the Undertakers have constructed,

**Schedule  
Sect. 20.**  
—

laid down, or placed their electric lines or other works or worked their undertaking in contravention of this sub-section, and as to whether the working of that wire or line or the current therein is or is not injuriously affected thereby, that question shall be determined by arbitration; and the arbitrator (unless he is of opinion that the wire or line, not having been so in existence at such time as aforesaid, has been placed in unreasonable proximity to the electric lines or works of the Undertakers) may direct the Undertakers to make any alterations in, or additions to, their system, so as to comply with the provisions of this section, and the Undertakers shall make those alterations or additions accordingly.

(2.) Seven days before commencing to lay down or place any electric line, or to use any electric line in any manner whereby the work of telegraphic or telephonic or electric signalling communication through any wire or line lawfully laid down or placed in any position may be injuriously affected, the Undertakers shall, unless otherwise agreed between the parties interested, give to the owner of the wire or line notice in writing specifying the course, nature, and gauge of the electric line, and the manner in which the electric line is intended to be used, and the amount and nature of the currents intended to be transmitted thereby, and the extent to and manner in which (if at all) earth returns are proposed to be used; and any owner entitled to receive that notice may serve a requisition on the Undertakers requiring them to adopt such precautions as may be therein specified in regard to the laying, placing, or user of the electric line for the purpose of preventing the injurious affection; and the Undertakers shall conform with such reasonable requirements as may be made by the owner for the purpose of preventing the communication through the wire or line from being injuriously affected as aforesaid.

If any difference arises between any such owner and the Undertakers with respect to the reasonableness of any requirements so made, that difference shall be determined by arbitration.

Provided that nothing in this sub-section shall apply to repairs or renewals of any electric line so long as the course, nature, and gauge of the electric line, and the amount and nature of the current transmitted thereby, are not altered.

(3.) If in any case the Undertakers make default in complying with the requirements of this section, they shall make full compensation to every such owner as aforesaid for any loss or damage which he may incur by reason thereof, and in addition thereto they shall be liable for each default to a penalty not exceeding five pounds, and to a daily penalty not exceeding forty shillings: Provided that the Undertakers shall not be subject to any such penalty as aforesaid if the court are of opinion that the case was one of emergency and that the Undertakers complied with the requirements of this section so far as was reasonable under the circumstances, or that the default was due to the fact that

the Undertakers were ignorant of the position of the wire or line affected thereby, and that that ignorance was not owing to any negligence on the part of the Undertakers.

**Schedule.  
Sect. 20.**

(4.) Nothing in this section contained shall be held to deprive any owner of any existing rights to proceed against the Undertakers by indictment, action, or otherwise, in relation to any of the matters aforesaid.

In the Electrical Energy (Generating Stations and Supply) Report (the Report of Lord Cross's Committee), Parliamentary Paper 218 of 1898, at p. ix., the Committee report: "As to the protection of telegraphs and telephones, the clauses now inserted in Provisional Orders seem to be sufficient in all ordinary cases; and regulations to protect the public can be made by the Board of Trade under s. 6 of the Act of 1882."

#### COMPULSORY WORKS.

21.—(1.) The Undertakers shall, within a period of two years after the commencement of the Special Order, lay down suitable and sufficient distributing mains for the purposes of general supply throughout every street or part of a street specified in that behalf in the Special Order, and shall thereafter maintain those mains.

Mains, etc.,  
to be laid  
down in  
streets  
specified in  
Special Order  
and in  
remainder of  
area of  
supply.

(2.) In addition to the mains herein-before specified the Undertakers shall, at any time after the expiration of eighteen months after the commencement of the Special Order, lay down suitable and sufficient distributing mains for the purposes of general supply throughout every other street or part of a street within the area of supply, upon being required to do so in manner provided by the Special Order.

All such mains as last above mentioned (unless already laid down) shall be laid down by the Undertakers within six months after any requisition in that behalf served upon them in accordance with the provisions of the Special Order has become binding upon them, or within such further time as may in any case be approved by the Board of Trade.

(3.) When any such requisition is made in respect of any street not repairable by the local authority, which the Undertakers are not specially authorised to break up by the Special Order, the Undertakers shall (unless the authority, or person by whom that street is repairable, consent to the breaking up thereof) forthwith apply to the Board of Trade under section thirteen of the Electric Lighting Act, 1882, for the written consent of the Board authorising and empowering the Undertakers to break up that street, and the requisition shall not be binding upon them if the Board of Trade refuse their consent in that behalf.

The Power Acts exclude this section from incorporation.

For s. 18 of the Act of 1882, see *ante*, p. 108.

Sections 23—26 provide for penalties for default in laying down any distributing mains; for revocation of the order in certain events; for the manner in which the requisition is to be made; and the steps which are to follow thereon.

**Schedule.  
Sect. 22.**

As to laying  
of electric  
line under  
special  
agreement.

**22.** Where the local authority are not themselves the Undertakers, the Undertakers shall, twenty-eight days at the least before commencing to lay in any street any electric line which is intended for supplying energy to any particular consumer, and not for the purposes of general supply, serve upon the local authority, and upon the owner or occupier of all premises abutting on so much of the street as lies between the points of origin and termination of the electric line so to be laid, a notice stating that the Undertakers intend to lay the electric line, and setting forth the effect of this section, and if within that period any two or more of those owners or occupiers require in accordance with the provisions of the Special Order that a supply shall be given to their premises, the necessary distributing main shall be laid by the Undertakers at the same time as the electric line intended for the particular consumer.

The Power Acts exclude this section from incorporation.

If Under-  
takers fail to  
lay down  
mains, etc.,  
Order may be  
revoked.

**23.—(1.)** If the Undertakers, not being a local authority, make default in laying down any distributing mains in accordance with the provisions of the Special Order within the periods prescribed in that behalf respectively, they shall be liable for each default to a penalty not exceeding five pounds for each day during which the default continues, and if the Board of Trade are of opinion in any case that the default is wilful and unreasonably prolonged they may, after considering any representations of the local authority (a), deal with the Special Order in manner provided by this section.

(2.) If the local authority are themselves the Undertakers, and make default in laying down any distributing main in accordance with the provisions of the Special Order, within the periods prescribed in that behalf respectively, the Board of Trade may deal with the Special Order in manner provided by this section.

(3.) Where the Board of Trade are authorised under this section to deal with a Special Order, they may either revoke the Order as to the whole or any part of the area of supply, or, if the Undertakers so desire, suffer it to remain in force as to that area or part thereof, subject to such conditions as they think fit to impose, and any conditions so imposed shall be binding on and observed by the Undertakers, and shall be of the like force and effect in every respect as though they were contained in the Special Order: Provided that the Board of Trade shall not revoke the Special Order as to part only of the area of supply where the Undertakers make a representation that they desire to be relieved of their liabilities as respects the rest of the area of supply, and in that case the Board of Trade shall not under this section revoke the Special Order otherwise than as to the whole of the area of supply.

(a) County of London Orders provide for the representations of the County Council being also considered.

The Power Acts exclude this section from incorporation.

**24.—**(1.) Any requisition requiring the Undertakers to lay down distributing mains for the purposes of general supply throughout any street or part of a street may be made by six or more (a) owners or occupiers of premises along that street or part of a street, or where the local authority are not themselves the Undertakers and have the control and management of the public lamps in that street or part of a street, by the local authority.

**Schedule.  
Sect. 24.**

Manner in which requisition is to be made.

(2.) Every such requisition shall be signed by the persons making it, or by the local authority (as the case may be), and shall be served upon the Undertakers.

(3.) Forms of requisition shall be kept by the Undertakers at their office and a copy shall, on application, be supplied free of charge to any owner or occupier of premises within the area of supply and, where necessary, to the local authority, and any requisition so supplied shall be deemed valid in point of form.

(a) County of London Orders provide for the requisition being made by "two or more," instead of "six or more," owners or occupiers.

In the Power Acts the above section is excluded from incorporation, and special provisions on the subject are enacted.

**25.—**(1.) Where any such requisition is made by any such owners or occupiers as aforesaid, the Undertakers (if they think fit) may, within fourteen days after the service of the requisition upon them, serve a notice on all the persons by whom the requisition is signed, stating that they decline to be bound by the requisition unless those persons or some of them will bind themselves to take, or will guarantee that there shall be taken, a supply of energy for a period of three years at the least, of such amount in the aggregate (to be specified by the Undertakers in the notice) as will, at the rates of charge for the time being charged by the Undertakers for a supply of energy from distributing mains to ordinary consumers within the area of supply, produce annually such reasonable sum as is specified by the Undertakers in the notice: Provided that in the notice the Undertakers shall not, without the authority of the Board of Trade, specify any sum exceeding twenty per centum upon the expense of providing and laying down the required distributing mains and any other mains or additions to existing mains which may be necessary for the purpose of connecting those distributing mains with the nearest available source of supply.

Provisions on requisition by owners or occupiers.

(2.) Where such a notice is served the requisition shall not be binding on the Undertakers unless within fourteen days after the service of the notice on all the persons signing the requisition has been effected, or in case of difference within fourteen days after the delivery of the arbitrator's award, there be tendered to the Undertakers an agreement severally executed by those persons or some of them, binding them to take or guaranteeing that there shall be taken a supply of energy for a period of three years at the least of such amount as will in the aggregate at

**Schedule.  
Sect. 25.**

the rates of charge above specified produce an annual sum amounting to the sum specified in the notice or determined by arbitration under this section, nor unless sufficient security for the payment to the Undertakers of all moneys which may become due to them from those persons under the agreement is offered to the Undertakers (if required by them by such notice as aforesaid) within the period limited for the tender of the agreement as aforesaid.

(3.) If the Undertakers consider that the requisition is unreasonable, or that, under the circumstances of the case, the provisions of this section ought to be varied, they may, within fourteen days after the service of the requisition upon them, appeal to the Board of Trade, and that Board, after such inquiry (if any) as they think fit, may, by order, either determine that the requisition is unreasonable, and shall not be binding upon the Undertakers, or may authorise the Undertakers by their notice to require a supply of energy to be taken for such longer period than three years, and to specify such sum or percentage, whether calculated as herein-before provided or otherwise, as is fixed or directed by the order, and the terms of the above-mentioned agreement shall be varied accordingly.

(4.) In case of any appeal to the Board of Trade under this section, any notice by the Undertakers under this section may be served by them within fourteen days after the decision of the Board of Trade.

(5.) If any difference arises between the Undertakers and any persons signing any such requisition as to any such notice or agreement, that difference shall, subject to the provisions of this section and to the decision of the Board of Trade upon any such appeal as aforesaid, be determined by arbitration.

County of London Orders substitute two years for the three years mentioned in sub-s. (8); the maximum of 20 per cent., mentioned in sub-s. (1), remaining the same.

The following section taken from the Bury Corporation Tramways Act, 1901 (1 Edw. 7, c. xxii.), authorises the Undertakers to make a charge for affording a stand-by to private plant even if no current be taken :

As to supply of electricity where consumer has separate supply.

"Notwithstanding anything contained in the Electric Lighting Acts, 1882 and 1888, a person shall not be entitled to demand from the corporation a supply of electrical energy to premises having a separate supply unless such person shall have previously agreed to pay to the corporation such minimum annual sum as will give to the corporation a reasonable return on the capital expenditure and other standing charges incurred by the corporation to meet the possible maximum demand of such person. In case the corporation and the person demanding such supply of electrical energy shall fail to agree the amount of such minimum annual sum to be paid by such person, the amount of such minimum annual sum shall be fixed by an electrical engineer to be appointed as arbitrator by the president of the Institution of Civil Engineers."

The above precedent has been followed in later cases. See *ante*, p. 73.

In the Power Acts the section in the text is excluded from incorporation.

**26.** Where any such requisition is made by the local authority it shall not be binding on the Undertakers, unless at the time when the service is effected, or within fourteen days thereafter, there be tendered to the Undertakers (if required by them) an agreement executed by the local authority, and binding them to take for a period of three years at the least a supply of energy for lighting such public lamps in the street or part of a street in respect of which the requisition is made as may be under their management or control.

**Schedule.  
Sect. 26.**

Provisions on  
requisition  
by local  
authority.

The Power Acts exclude this section from incorporation.

**SUPPLY.**

**27.—(1.)** The Undertakers shall, upon being required to do so by the owner or occupier of any premises situate within fifty yards from any distributing main of the Undertakers in which they are, for the time being, required to maintain or are maintaining a supply of energy for the purposes of general supply to private consumers under the Special Order or the Board of Trade regulations, give and continue to give a supply of energy for those premises in accordance with the provisions of the Special Order and of the said regulations, and they shall furnish and lay any electric lines that may be necessary for the purpose of supplying the maximum power with which any such owner or occupier is entitled to be supplied under the Special Order subject to the conditions following; (that is to say,)—

Undertakers  
to furnish  
sufficient  
supply of  
energy to  
owners and  
occupiers  
within the  
area of  
supply.

The cost of so much of any electric line for the supply of energy to any owner or occupier as may be laid upon the property of that owner or in the possession of that occupier, and of so much of any such electric lines as it may be necessary to lay for a greater distance than sixty feet from any distributing main of the Undertakers, although not on that property, shall, if the Undertakers so require, be defrayed by that owner or occupier.

**(2.)** Every owner or occupier of premises requiring a supply of energy shall—

- (a.)** Serve a notice upon the Undertakers specifying the premises in respect of which the supply is required and the maximum power required to be supplied, and the day (not being an earlier day than a reasonable time after the date of the service of the notice) upon which the supply is required to commence; and
- (b.)** If required by the Undertakers, enter into a written contract with them to continue to receive and pay for a supply of energy for a period of at least two years of such an amount that the payment to be made for the supply, at the rate of charge for the time being charged by the Undertakers for a supply of energy to ordinary consumers within the area of

**Schedule.**  
**Sect. 27.**

supply, shall not be less than twenty per centum per annum on the outlay incurred by the Undertakers in providing any electric lines required under this section to be provided by them for the purpose of the supply, and if required by the Undertakers give to them security for the payment to them of all moneys which may become due to them by the owner or occupier in respect of any electric lines to be furnished by the Undertakers, and in respect of energy to be supplied by them.

(3.) Provided always, that the Undertakers may, after they have given a supply of energy in respect of any premises, by notice in writing, require the owner or occupier of those premises, within seven days after the date of the service of the notice, to give to them security for the payment of all moneys which may become due to them in respect of the supply, in case the owner or occupier has not already given that security, or in case any security given has become invalid or is insufficient; and in case any such owner or occupier fail to comply with the terms of the notice, the Undertakers may, if they think fit, discontinue to supply energy for the premises so long as the failure continues.

(4.) Provided also, that if the owner or occupier of any such premises as aforesaid uses any form of lamp or burner, or uses the energy supplied to him by the Undertakers for any purposes, or deals with it in any manner so as to interfere unduly or improperly with the efficient supply of energy to any other body or person by the Undertakers, the Undertakers may, if they think fit, discontinue to supply energy to those premises so long as the lamp or burner is so used, or the energy is so used or dealt with.

(5.) Provided also, that the Undertakers shall not be compelled to give a supply of energy to any premises unless they are reasonably satisfied that the electric lines, fittings, and apparatus therein are in good order and condition, and not calculated to affect injuriously the use of energy by the Undertakers or by other persons.

(6.) If any difference arises under this section as to any improper use of energy or as to any alleged defect in any electric lines, fittings, or apparatus, that difference shall be determined by arbitration.

See *ante*, p. 24. Section 80 renders the Undertakers liable for penalties for default in furnishing supply.

See cases cited in the notes to ss. 19, 20 of the Act of 1882, *ante*, pp. 116 *et seq.*

The Power Acts exclude this section from incorporation, and enact special provisions on the subject.

The case of *London Corporation v. City of London Electric Lighting Co.*, tried before KKKEWICH, J., reported *Electrician*, February 17th, 1899, p. 582, turned upon the construction of three agreements between the parties, and amongst other questions which came before the court for decision were, (1) whether or not the Corporation were entitled to have the public and



private lighting of the City carried out by separate mains, and by separate generating plant, both in the main thoroughfares and in the side streets, courts, lanes, etc.; and (2) whether or not, for the purpose of public lighting, the Corporation were entitled to a continuous current of electricity both in the main thoroughfares and in the side streets, etc.

**Schedule.  
Sect. 27.**

**NOTE.**

**28.—(1.)** The maximum power with which any consumer shall be entitled to be supplied shall be of such amount as he may require to be supplied with, not exceeding what may be reasonably anticipated as the maximum consumption on his premises: Provided that where any consumer has required the Undertakers to supply him with a maximum power of any specified amount, he shall not be entitled to alter that maximum except upon one month's notice to the Undertakers, and any expenses reasonably incurred by the Undertakers in respect of the service lines by which energy is supplied to the premises of that consumer, or any fittings or apparatus of the Undertakers upon those premises, consequent upon the alteration, shall be paid by him to the Undertakers, and may be recovered summarily as a civil debt.

Maximum power.

(2.) If any difference arises between any such owner or occupier and the Undertakers as to what may be reasonably anticipated as the consumption on his premises or as to the reasonableness of any expenses under this section, that difference shall be determined by arbitration.

This section is excluded from incorporation by the Power Acts, which contain special provisions on the subject. See the Chapter on the *Power Acts*, *post*, p. 488.

**29.** Where the local authority are not themselves the Undertakers, the Undertakers shall, upon receiving reasonable notice from the local authority requiring them to supply energy to any public lamps within the distance of seventy-five yards from any distributing main of the Undertakers in which they are for the time being required to maintain a current of energy for the purposes of general supply under the Special Order, or the Board of Trade regulations, give and continue to give a supply of energy to those lamps in such quantities as the local authority may require to be supplied.

Supply of energy to public lamps.

The Power Acts exclude this section from incorporation.

**30.—(1.)** Whenever the Undertakers make default in supplying energy to any owner or occupier of premises to whom they may be and are required to supply energy under the Special Order, they shall be liable in respect of each default to a penalty not exceeding forty shillings for each day on which the default occurs.

Penalty for failure to supply.

(2.) Where the local authority are not themselves the Undertakers, and the Undertakers make default in supplying energy to the public lamps to which they may be and are required to supply energy under the Special Order, the Undertakers shall be liable in respect of each default

**Schedule.**  
**Sect. 30.**  
 —

to a penalty not exceeding forty shillings for each lamp, and for each day on which the default occurs.

(3.) Whenever the Undertakers make default in supplying energy in accordance with the terms of the Board of Trade regulations they shall be liable to such penalties as are prescribed by the regulations in that behalf.

(4.) Provided that the penalties to be inflicted on the Undertakers under this section shall in no case exceed in the aggregate in respect of any defaults not being wilful defaults on the part of the Undertakers the sum of fifty pounds for any one day, and provided also that in no case shall any penalty be inflicted in respect of any default if the court are of opinion that the default was caused by inevitable accident or *force majeure* or was of so slight or unimportant a character as not materially to affect the value of the supply.

Some of the Power Acts exclude from incorporation this section "so far as respects supply in bulk"; others exclude the clause from incorporation altogether. All of the Acts contain special provisions on the subject of penalties.

A cable laid down proved defective, and the supply of energy thus broke down. This was held to be "inevitable accident" (*Sun Insurance Co. v. Dublin Corporation, Electrician*, December 9th, 1899, p. 240).

The Metropolitan Electric Supply Company were summoned by the Marylebone Vestry and Guardians for making default in supplying electrical energy to the workhouse and vestry premises on certain days. The company admitted the default, and contended that the same was due to inevitable accident, caused by the great increase in the demand for electricity, which had exceeded their expectations. The case was adjourned for three months. (*Marylebone Vestry v. Metropolitan Electric Supply Co.*—*Jl. of G. L.*, January 2nd, 1900, p. 84, and *Electrician*, January 5th, 1900, p. 375. Ultimately small fines were imposed, *Jl. of G. L.*, May 1st, 1900, p. 1,236.) On a subsequent occasion the same company were summoned on behalf of the London County Council for default in supplying electric energy to the premises of various individuals, and the magistrate inflicted a fine with costs (*Jl. of G. L.*, January 28rd, 1900, p. 212). The keeper of a licensed house at Deptford summoned the London Electric Supply Corporation for failure to supply electric energy to his premises. The default was admitted, but the defence was *force majeure*, it being contended that, the supply of electricity having become deficient owing to unavoidable causes, it became essential that some part of the district of the company should be cut off and that Deptford was selected as causing the least public inconvenience. The full penalty of forty shillings was inflicted in each of seven cases, with twenty guineas costs in the first case and two shillings costs in each of the others (*Shaddick v. London Electric Supply Corp.*, *Jl. of G. L.*, May 8th, 1900, p. 1,235). The same company were summoned at the South-Western Police Court at the instance of the London County Council for failure to supply certain public offices. The defence was *force majeure*. The magistrate found that there was no evidence of any negligence. The summons was dismissed. *L. C. C. v. London E. S. Corp.*, *Jl. of G. L.*, May 1st, 1900, p. 1,185.

## PRICE.

Schedule.  
Sect. 31.Methods of  
charging.

**31.**—(1.) The Undertakers may charge for energy supplied by them to any ordinary consumer (otherwise than by agreement)—

- (1.) By the actual amount of energy so supplied ; or
- (2.) By the electrical quantity contained in the supply ; or
- (3.) By such other method as may for the time being be approved by the Board of Trade.

(2.) Provided that where the Undertakers charge by any method so approved by the Board of Trade, any consumer who objects to that method may by one month's notice in writing require the Undertakers to charge him at their option by the actual amount of energy supplied to him, or by the electrical quantity contained in the supply, and thereafter the Undertakers shall not, except with the consumer's consent, charge him by any other method.

(3.) Provided also that, before commencing to supply energy through any distributing main for the purposes of general supply, the Undertakers shall, if the local authority are not themselves the Undertakers, give notice to the local authority, and, if the local authority are themselves the Undertakers, by public advertisement, by what method they propose to charge for energy supplied through that main ; and, where the Undertakers have given any such notice, they shall not be entitled to change that method of charging except after one month's notice of the change has been given by them, if the local authority are not themselves the Undertakers to the local authority, and in any case to every consumer of energy who is supplied by them from the main.

County of London Orders provide for notice to the County Council.

The Power Acts exclude this section from incorporation, but make special provisions on the subject.

**32.**—(1.) The prices to be charged by the Undertakers for energy supplied by them shall not exceed those stated in that behalf in the Special Order or in the case of a method of charge approved by the Board of Trade, such price as the Board of Trade determine on approving the method. Maximum prices.

(2.) Provided that if, in a case where the local authority are not themselves the Undertakers, either the local authority or the Undertakers, at any time after the expiration of seven years after the commencement of the Special Order, make a representation to the Board of Trade that the prices or methods of charge stated in the Special Order or approved by the Board of Trade ought to be altered, the Board of Trade, after such inquiry as they may think fit, may make an order varying the prices or methods of charge stated in the Special Order or so approved as aforesaid, or substituting other prices or methods of charge in lieu thereof, and the prices or methods of charge so varied or substituted shall have effect on and after such day as may be mentioned in the order, as if they

**Schedule.  
Sect. 32.**

had been stated in the Special Order : Provided also, that the prices and methods of charge for the time being in force may be altered in like manner at any time after the expiration of any or every period of seven years after they were last altered.

The Power Acts exclude this section from incorporation.

County of London Orders, whether in favour of companies or of local authorities, give the County Council power of making representation.

In County of London Orders in favour of companies or persons it used to be the practice to substitute August 26th, 1889, for "after the commencement of this order," as the period from which the seven years are to run. Under 1897 Orders (that period of seven years having expired) the representation may be made "at any time after August 26th, 1896." (See, *e.g.*, County of London (Northern Extensions) P. O. 1897, s. 82.) In the most recent instance the representation may be made "at any time" with the usual proviso as in the section in the text. See Lewisham Electric Lighting Order, 1901, confirmed by 1 Edw. 7, ch. clxxviii.

**Other charges  
by agreement.**

**33.** Subject to the provisions of the Special Order and of the principal Act, and to the right of the consumer to require that he shall be charged according to some one or other of the methods above mentioned, the Undertakers may make any agreement with a consumer as to the price to be charged for energy, and the mode in which those charges are to be ascertained, and may charge accordingly.

The Power Acts exclude this section from incorporation.

**Price to  
public lamps.**

**34.** Where the local authority are not themselves the Undertakers, the price to be charged by the Undertakers and to be paid to them for all energy supplied to the public lamps, and the mode in which those charges are to be ascertained, shall be settled by agreement between the local authority and the Undertakers, and, in case of difference, shall be determined by arbitration, regard being had to the circumstances of the case and the distributing or other mains (if any) which may have to be laid for the purpose, and the prices charged to ordinary consumers in the district.

The Power Acts exclude this section from incorporation.

**ELECTRIC INSPECTORS.****Appointment  
of electric  
inspectors.**

**35.—(1.)** The local authority (*a*), so long as they are not themselves the Undertakers, and, while the local authority are themselves the Undertakers, the Board of Trade on the application of any consumer or of the Undertakers, may appoint, and keep appointed, one or more competent and impartial person or persons to be electric inspectors under the Special Order.

(2.) If, in a case where the local authority are not themselves the Undertakers, no electric inspector is appointed by the local authority, or the inspection of electric lines and works is imperfectly attended to

by the local authority, or the local authority themselves become the Undertakers for the purposes of the Special Order, the Board of Trade, on the application of any consumer, or of the Undertakers, may appoint, and keep appointed, one or more competent and impartial person or persons to be electric inspectors under the Special Order.

**Schedule  
Sect. 35.**

(a) In all County of London Orders the County Council appoint the electric inspectors, and the Board of Trade are authorised to appoint on their default.

The Power Acts exclude this section from incorporation, and make special provisions on the subject of electric inspectors.

**36.—(1.)** The duties of an electric inspector under the Special Order shall be as follows :—

Duties of  
electric  
inspectors

- (a.) The inspection and testing, periodically and in special cases, of the Undertakers' electric lines and works and the supply of energy given by them ;
- (b.) The certifying and examination of meters ; and
- (c.) Such other duties in relation to the undertaking as may be required of him under the provisions of the Special Order or of the Board of Trade regulations.

(2.) The local authority (a), with the approval of the Board of Trade, or the Board of Trade, if the inspector is appointed by them, may prescribe the manner in which and the times at which any such duties are to be performed by an electric inspector, and also the fees to be taken by him, and those fees shall be accounted for and applied as may be directed by the local authority or the Board of Trade, as the case may be.

(a) In County of London Orders the County Council. For the rules made by the London County Council as to testing electricity meters, etc., and approved by the Board of Trade, see the Chapter on COUNTY OF LONDON, *post*, p. 808.

The Power Acts exclude this section from incorporation.

**37.—(1.)** The local authority (a) may pay to any electric inspector appointed by them under the Special Order such reasonable remuneration (if any) as they may determine, and that remuneration may be in addition to, or in substitution for, any fees directed to be paid to electric inspectors in respect of their duties under the Special Order or the Board of Trade regulations, according as the local authority determine.

Remuneration of  
electric  
inspectors.

(2.) Where the local authority are themselves the Undertakers, they shall pay to every electric inspector appointed under the provisions of the Special Order such reasonable remuneration (if any) as may be determined by the Board of Trade, and that remuneration may be in addition to, or in substitution for, any fees which are directed to be paid to electric inspectors for services rendered by them under the Special Order or the Board of Trade regulations, as may be settled by

**Schedule.**  
**Sect. 37.**  
—

that Board; and where any such remuneration is settled to be in substitution for fees, any fees payable by any party other than the Undertakers shall, in lieu of being paid to the electric inspector for his own use, be due and paid to him on behalf and for the use of the Undertakers, and shall be carried by them to the credit of the local rate.

(a) In County of London Orders the County Council.

The Power Acts exclude this section from incorporation.

Notice of  
accidents and  
inquiries by  
Board of  
Trade.

**38.—(1.)** The Undertakers shall send to the Board of Trade notice of any accident by explosion, or fire, and also of any other accident of such kind as to have caused, or to be likely to have caused, loss of life, or personal injury which has occurred in any part of the Undertakers' works or their circuits, or in connexion with those works or circuits, and also notice of any loss of life or personal injury occasioned by any such accident. The notice shall be sent by the earliest practicable post after the accident occurs, or, as the case may be, after the loss of life or personal injury becomes known to the Undertakers.

If the Undertakers fail to comply with the provisions of this subsection they shall be liable, for each default, to a penalty not exceeding twenty pounds (a).

(2.) The Board of Trade may also, if they deem it necessary, appoint any electric inspector or other fit person to inquire and report as to the cause of any accident affecting the safety of the public, which may have been occasioned by or in connexion with the Undertakers' works, whether notice of the accident has or has not been received from the Undertakers, or as to the manner and extent in and to which the provisions of the Special Order and the principal Act, and of the Board of Trade regulations, so far as those provisions affect the safety of the public, have been complied with by the Undertakers; and any person appointed under this section, not being an electric inspector, shall for the purposes of his appointment have all the powers of an electric inspector under the Special Order (b).

(a) Sub-s. 1 was first inserted in Provisional Orders in 1898. See also Regulation A, 15, *post*, p. 247, and (under s. 4 of 1888 Act) Regulation 16, *post*, p. 264. Notice must also be given under the Factory and Workshop Act, 1901, to the inspector for the district (s. 19). See also Notice of Accidents Act, 1894 (57 & 58 Vict. c. 28).

(b) For instances of inquiries under sub-s. (2), see Parliamentary Paper, 1895, No. 55 (City and Euston Road), and the like, 1895, No. 186 (Southwark Bridge). A report of an inquiry into a fatal accident at Southampton on December 12th, 1898, has been printed for the Stationery Office. For other instances see Liverpool Overhead Railway Inquiry, *El. Rev.*, March 28th, 1902, p. 580; City of London Inquiry, *Electrician*, January 17th, 1902, p. 508. The Report of Mr. Trotter was printed by the Board of Trade.

## TESTING AND INSPECTION.

Schedule.  
Sect. 39.

39. On the occasion of the testing of any main of the Undertakers reasonable notice thereof shall be given to the Undertakers by the electric inspector, and the testing shall be carried out at such suitable hours as, in the opinion of the inspector, will least interfere with the supply of energy by the Undertakers, and in such manner as the inspector thinks expedient, but, except under the provisions of an order made in each case in that behalf by the Board of Trade, he shall not be entitled to have access to or interfere with the mains of the Undertakers at any points other than those at which the Undertakers have reserved for themselves access to the said mains: Provided that the Undertakers shall not be held responsible for any interruption in the supply of energy which may be occasioned by or required by the inspector for the purpose of any such testing as aforesaid. Provided also that the testings shall not be made in regard to any particular portion of a main oftener than once in any three months, unless in pursuance of an order made in each case in that behalf by the Board of Trade.

Testing of  
mains.

40. An electric inspector, if and when required to do so by any consumer, shall, on payment by the consumer of the prescribed fee (a), test the variation of electric pressure at the consumer's terminals, or make such other inspection and testing of the service lines, apparatus, and works of the Undertakers upon the consumer's premises as may be necessary for the purpose of determining whether the Undertakers have complied with the provisions of the Special Order and the Board of Trade regulations.

Testing of  
works and  
supply on  
consumer's  
premises.

(a) See s. 36 (2).

Some of the Power Acts exclude this section from incorporation.

41.—(1.) Where the local authority are not themselves the Undertakers, the Undertakers shall at such places, within a reasonable distance from a distributing main, establish at their own cost and keep in proper condition such reasonable number of testing stations as the local authority think proper and sufficient for testing the supply of energy by the Undertakers through the main, and shall place thereat proper and suitable instruments of a pattern to be approved by the Board of Trade, and shall connect those stations by means of proper and sufficient electric lines with the mains, and supply energy thereto for the purpose of the testing.

Undertakers,  
not being  
local  
authority,  
to establish  
testing  
stations.

(2.) If any dispute arises between the local authority and the Undertakers as to whether the number of the testing stations and the distance from the main at which they are established is reasonable or excessive, or as to any excessive or improper use of energy for the testing, or as to the performance by the Undertakers of their duties under this section, that dispute shall be determined by arbitration.

**Schedule.**  
**Sect. 41.**

(3.) Where the local authority are themselves the Undertakers, a court of summary jurisdiction may upon the application of any ten consumers direct the Undertakers, at their own cost, to establish at such places, within a reasonable distance from a distributing main, and keep in proper condition, such reasonable number of testing stations as the court think proper and sufficient for testing the supply of energy by the Undertakers through the main, and thereupon the Undertakers shall establish such testing places, and provide thereat such proper and suitable instruments of a pattern to be approved by the Board of Trade as the court direct, and they shall connect those stations by means of proper and sufficient electric lines with the mains, and supply energy thereto for the purpose of the testing.

The Power Acts (except Clyde Valley) exclude this section from incorporation.

In County of London Orders the County Council are charged with the duty of seeing to the establishment of testing stations. See Chapter on COUNTY OF LONDON, *post*, p. 308.

Undertakers  
to keep  
instruments  
on their  
premises.

**42.** The Undertakers shall set up and keep upon all premises from which they supply energy by any distributing mains such suitable and proper instruments of such pattern and construction as may be approved or prescribed by the Board of Trade, and shall take and record, and keep recorded, such observations as the Board of Trade may prescribe, and any observations so recorded shall be receivable in evidence.

Some of the Power Acts exclude this section from incorporation.

Readings of  
instruments  
to be taken.

**43.—(1.)** The Undertakers shall keep in efficient working order all instruments which they are required by or under the Special Order to place, set up, or keep at any testing station or on their own premises, and any electric inspector appointed under the Special Order may examine and record the readings of those instruments, and any readings so recorded shall be receivable in evidence.

(2.) Where the local authority are not themselves the Undertakers, the examinations and readings under this section must be made at such times and in such manner as may be directed by the authority by whom the inspector is appointed.

Some of the Power Acts exclude this section from incorporation.

Electric  
inspector  
may test  
undertakers'  
instruments.

**44.** Any electric inspector appointed under the Special Order shall have the right to have access at all reasonable hours to the testing stations and premises of the Undertakers for the purpose of testing the electric lines and instruments of the Undertakers, and ascertaining if they are in order, and in case they are not in order he may require the Undertakers forthwith to have them put in order.

Some of the Power Acts exclude this section from incorporation.



45. The Undertakers may, if they think fit, on each occasion of the testing of any main or service line, or the testing or inspection of any instruments of the Undertakers by any electric inspector, be represented by some officer or other agent, but that officer or agent shall not interfere with the testing or inspection.

**Schedule.  
Sect. 45.**

Representa-  
tion of  
undertakers  
at testings.

46. The Undertakers shall afford all facilities for the proper execution of the Special Order with respect to inspection and testing and the readings and inspection of instruments, and shall comply with all the requirements of or under the Special Order in that behalf: and in case the Undertakers make default in complying with any of the provisions of this section they shall be liable in respect of each default to a penalty not exceeding five pounds, and to a daily penalty not exceeding one pound.

Undertakers  
to give  
facilities for  
testing.

47.—(1.) Every electric inspector shall, on the day immediately following that on which any testing has been completed by him under the Special Order, make and deliver a report of the results of his testing to the authority or person by whom he was required to make the testing, and to the Undertakers, and that report shall be receivable in evidence.

Report of  
results of  
testing.

(2.) If the Undertakers or any such authority or person are or is dissatisfied with any report of any electric inspector, they or he may appeal to the Board of Trade against the report, and thereupon the Board of Trade shall inquire into and decide upon the matter of the appeal, and their decision shall be final and binding on all parties.

48.—(1.) Save as otherwise provided by the Special Order or by the Board of Trade regulations, all fees and reasonable expenses of an electric inspector shall, unless agreed, be ascertained by a court of summary jurisdiction, or (where the inspector is appointed by them) by the Board of Trade, and shall be paid by the Undertakers, and if a local authority are the Undertakers may be recovered summarily as a civil debt.

Expenses of  
electric  
inspector.

(2.) Provided that where the report of an electric inspector, or the decision of the Board of Trade, shows that any consumer was guilty of any default or negligence, the fees and expenses shall, on being ascertained as above mentioned, be paid by the consumer as the court or the Board, by whom the fees are ascertained, having regard to the report or decision, direct, and may be recovered summarily as a civil debt.

(3.) Provided also, that in any proceedings for penalties under the Special Order the fees and expenses of an electric inspector incurred in connexion with the proceedings shall be payable by the complainant or defendant as the court direct.

"Reasonable expenses" means expenses specifically incurred by an electric inspector in making tests and inspections, and does not include

**Schedule.**  
**Sect. 48.**  
—

salary appointed to the inspector, or the general expenses of his laboratory and staff. (*Crawford on behalf of London Corporation v. City of London Electric Lighting Co.* (1898), 67 L. J. Q. B. 942. See a special enactment on this subject in City of London Electric Lighting Order, 1899 (confirmed by 62 & 63 Vict. ch. cclxxv.), s. 49.)

This section is excluded from incorporation by the Power Acts (excepting the Clyde Valley Act), and they contain special provisions on the subject.

**METERS.**

Meters to be  
used except  
by agree-  
ment.

**49.** The amount of energy supplied by the Undertakers to any ordinary consumer under the Special Order, or the electrical quantity contained in the supply (according to the method by which the Undertakers elect to charge), herein-after referred to as "the value of the supply," shall, except as otherwise agreed between the consumer and the Undertakers, be ascertained by means of an appropriate meter duly certified under the provisions of the Special Order.

In two of the Power Acts special provisions will be found with regard to meters to be used, and there is a provision for arbitration in the absence of agreement as to the type of meter to be used, with a further provision that if either the company or the "authorised undertakers" shall so require the value of the supply shall be ascertained by three such meters, one to belong to and be kept in repair by the company, another to belong to and be kept in repair by the authorised undertakers, and a third to be provided and kept in repair by the company at the joint expense of the company and the authorised undertakers. In such case the amount of energy supplied is to be ascertained by the average of the readings of these meters any meter showing a difference from the mean reading of the three of more than 3 per cent. is to be re-calibrated, and the cost borne equally by the company and the authorised undertakers. County of Durham Act, 1900, s. 14, and North Metropolitan Act, 1900, s. 14. These Acts do not incorporate s. 49.

Meter to be  
certified.

**50.** A meter shall be considered to be duly certified under the provisions of the Special Order if it be certified by an electric inspector appointed under the Special Order to be a correct meter, and to be of some construction and pattern and to have been fixed and to have been connected with the service lines in some manner approved by the Board of Trade, and every such meter is herein-after referred to as a "certified meter": Provided that where any alteration is made in any certified meter, or where any such meter is unfixed or disconnected from the service lines, that meter shall cease to be a certified meter unless and until it is again certified as a certified meter under the provisions of the Special Order.

See note to preceding section.

Inspector to  
certify meter.

**51.** An electric inspector, on being required to do so by the Undertakers or by any consumer, and on payment of the prescribed fee (a) by the party so requiring him, shall examine any meter intended for

ascertaining the value of the supply, and shall certify it as a certified meter if he considers it entitled to be so certified.

**Schedule.  
Sect. 51.**

(a) See s. 36 (2).

52. Where the value of the supply is under the Special Order required to be ascertained by means of an appropriate meter, the Undertakers shall, if required by any consumer, supply him with an appropriate meter, and shall, if required, fix it upon the premises of the consumer and connect the service lines therewith and procure the meter to be duly certified under the provisions of the Special Order, and for those purposes may authorise and empower any officer or person to enter upon the premises at all reasonable times and execute all necessary works and do all necessary acts; provided that previously to supplying any such meter the Undertakers may require the consumer to pay to them a reasonable sum in respect of the price of the meter, or to give security therefor, or (if he desires to hire the meter) may require him to enter into an agreement for the hire of the meter as hereinafter provided.

Undertakers to supply meters if required to do so.

As to Power Acts, see note to s. 49.

53. No consumer shall connect any meter used or to be used under the Special Order for ascertaining the value of the supply with any electric line through which energy is supplied by the Undertakers, or disconnect any such meter from any such electric line, unless he has given to the Undertakers not less than forty-eight hours' notice in writing of his intention to do so, and if any person acts in contravention of this section he shall be liable for each offence to a penalty not exceeding forty shillings.

Meters not to be connected or disconnected without notice.

54.—(1.) Every consumer shall at all times at his own expense keep all meters belonging to him, whereby the value of the supply is to be ascertained, in proper order for correctly registering that value, and in default of his so doing the Undertakers may cease to supply energy through the meter.

Consumer to keep his meter in proper order.

(2.) The Undertakers shall have access to and be at liberty to take off, remove, test, inspect, and replace any such meter at all reasonable times: Provided that all reasonable expenses of and incident to any such taking off, removing, testing, inspecting, and replacing, and the procuring the meter to be again duly certified where the re-certifying is thereby rendered necessary, shall, if the meter is found to be not in proper order, be paid by the consumer, but if it is found to be in proper order all expenses connected therewith shall be paid by the Undertakers.

Where the consumer hires a meter from the Undertakers the latter keep it in repair. See s. 56.

See note to s. 49.

**Schedule.****Sect. 55.**

Power to the Undertakers to let meters.

**55.** The Undertakers may let for hire any meter for ascertaining the value of the supply, and any fittings thereto, for such remuneration in money and on such terms with respect to the repair of the meter and fittings, and for securing the safety and return to the Undertakers of the meter and fittings, as may be agreed upon between the hirer and the Undertakers, or, in case of difference, determined by the Board of Trade, and that remuneration shall be recoverable by the Undertakers summarily as a civil debt.

Undertakers to keep meters let for hire in repair.

**56.** The Undertakers shall, unless the agreement for hire otherwise provides, at all times, at their own expense, keep all meters let for hire by them to any consumer, whereby the value of the supply is ascertained, in proper order for correctly registering that value, and in default of their doing so the consumer shall not be liable to pay rent for the meters during such time as the default continues. The Undertakers shall, for the purposes aforesaid, have access to and be at liberty to remove, test, inspect, and replace any such meter at all reasonable times: Provided that the expenses of procuring any such meter to be again duly certified, where that re-certifying is thereby rendered necessary, shall be paid by the Undertakers.

Where a consumer uses his own meter, he must keep it in repair. See s. 54.

Differences as to correctness of meter to be settled by inspector.

**57.** If any difference arises between any consumer and the Undertakers as to whether any meter, whereby the value of the supply is ascertained (whether belonging to the consumer or to the Undertakers), is or is not in proper order for correctly registering that value, or as to whether that value has been correctly registered in any case by any meter, that difference shall be determined upon the application of either party by an electric inspector or, where the local authority (a) are the consumers, by an inspector to be appointed by the Board of Trade, and that inspector shall also order by which of the parties the costs of and incidental to the proceedings before him shall be paid, and the decision of the inspector shall be final and binding on all parties.

Subject as aforesaid, the register of the meter shall be conclusive evidence (b) in the absence of fraud of the value of the supply.

(a) In County of London Orders the County Council.

(b) Cf. the Gasworks Clauses Act, 1871, s. 20, which makes the register "*prima facie* evidence." Where a new meter registered three times as much as a former meter had registered for five years during the corresponding quarter, JUDGE RENTOUL, K.C., in the City of London Court, held, on the facts, that the register of the meter was not conclusive evidence. *City of London E. L. Co. v. Oakley*, *Times*, Nov. 12, 1902; *Electrician*, Nov. 14, 1902, p. 158; *El. Rev.*, Nov. 14, 1902, p. 817; *Jl. of G. L.*, Nov. 18, 1902, p. 1882.

See note to s. 49.

**58.** Where any consumer who is supplied with energy by the Undertakers from any distributing main is provided with a certified meter for the purpose of ascertaining the value of the supply and the Undertakers change the method of charging for energy supplied by them from the main, the Undertakers shall pay to that consumer the reasonable expenses to which he may be put in providing a new meter for the purpose of ascertaining the value of the supply according to the new method of charging, and those expenses may be recovered by the consumer from the Undertakers summarily as a civil debt.

**Schedule.  
Sect. 58.**

Undertakers to pay expenses of providing new meters where method of charge altered.

Some of the Power Acts exclude this section from incorporation. See note to s. 49.

**59.** In addition to any meter which may be placed upon the premises of any consumer to ascertain the value of the supply, the Undertakers may place upon his premises such meter or other apparatus as they may desire for the purpose of ascertaining or regulating either the amount of energy supplied to the consumer or the number of hours during which the supply is given, or the maximum power taken by the consumer, or any other quantity or time connected with the supply: Provided that the meter or apparatus shall be of some construction and pattern and shall be fixed and connected with the service lines in some manner approved by the Board of Trade, and shall be supplied and maintained entirely at the cost of the Undertakers, and shall not, except by agreement, be placed otherwise than between the mains of the Undertakers and the consumer's terminals.

Undertakers may place meters to measure supply or to check measurement.

See note to s. 49.

**MAPS.**

**60.—(1.)** The Undertakers shall forthwith after commencing to supply energy under the Special Order cause a map to be made of the area of supply, and shall cause to be marked thereon the line and the depth below the surface of all their then existing mains, service lines, and other underground works and street boxes, and shall once in every year cause that map to be duly corrected so as to show the then existing lines. The Undertakers shall also, if so required by the Board of Trade or the Postmaster-General (a), cause to be made sections showing the level of all their existing mains and underground works other than service lines. The said map and sections shall be made on such scale or scales as the Board of Trade prescribe.

Map of area of supply to be made.

**(2.)** Every map and section so made or corrected, or a copy thereof, marked with the date when it was so made or last corrected, shall be kept by the Undertakers at their principal office within the area of supply, and shall at all reasonable times be open to the inspection of all applicants, and those applicants may take copies of it or any part thereof. The Undertakers may demand and take from every such applicant such fee not exceeding one shilling for each inspection of the

**Schedule.**  
**Sect. 60.**  
—

map, section, or copy, and such further fee not exceeding five shillings for each copy of it, or any part thereof, taken by the applicant, as they prescribe.

(3.) The Undertakers shall, if required by the Board of Trade or the Postmaster-General (a), or, where the local authority are not themselves the Undertakers, by the local authority, supply to them or him a copy of any such map or section and cause that copy to be duly corrected so as to agree with the original or originals thereof as kept for the time being at the office of the Undertakers.

(4.) If the Undertakers fail to comply with any of the requirements of this section they shall for each default be liable to a penalty not exceeding ten pounds, and to a daily penalty not exceeding two pounds.

(a) In County of London Orders the words " or the County Council " are added.

Some of the Power Acts exclude this section from incorporation and make special provisions on the subject. See the Durham, North Metropolitan, Yorkshire, and Cornwall Acts.

NOTICES, ETC.

Notices, etc.,  
may be  
printed or  
written.

**61.** Notices, orders, and other documents under the Special Order may be in writing or in print, or partly in writing and partly in print, and where any notice, order, or document requires authentication by the local authority, the signature thereof by the clerk or surveyor to the local authority shall be sufficient authentication.

Service of  
notices, etc.

**62.—(1.)** Any notice, order, or document required or authorised to be served upon any body or person under the Special Order or the principal Act may be served by being addressed to that body or person, and being left at or transmitted through the post to the following addresses respectively :—

- (a) in the case of the Board of Trade, the office of the Board of Trade ;
- (b) in the case of the Postmaster-General, the General Post Office ;
- (c) in the case of any county council, the office of that council ;
- (d) in the case of any local authority, the office of that local authority ;
- (e) in the case of the Undertakers, where the Undertakers are not a local authority, the registered office of the Undertakers ;
- (f) in the case of a company having a registered office, at that registered office, and in the case of a company having an office or offices, but no registered office, the principal office of that company ;
- (g) in the case of any other person, the usual or last-known place of abode of that person.

**Schedule.  
Sect. 62.**  

---

(2.) A notice, order, or document by this schedule required or authorised to be served on the owner or occupier of any premises shall be deemed to be properly addressed if addressed by the description of the "owner" or "occupier" of the premises (naming the premises) without further name or description.

(3.) A notice, order, or document by the Special Order required or authorised to be served on the owner or occupier of premises may be served by delivering it, or a true copy thereof, to some person on the premises, or, if there is no person on the premises to whom the same can with reasonable diligence be delivered, by fixing it on some conspicuous part of the premises.

(4.) Subject to the provisions of the Special Order as to cases of emergency, where the interval of time between the service of any notice or document under the provisions of the Special Order and the execution of any works, or the performance of any duty or act, is less than seven days, the following days shall not be reckoned in the computation of that time; that is to say, Sunday, Christmas Day, Good Friday, any bank holiday under and within the meaning of the Bank Holiday Act, 1871, and any Act amending that Act, and any day appointed for public fast, humiliation, or thanksgiving. 34 & 35 Vict. c. 17.

**REVOCATION OF SPECIAL ORDER.**

**63.** If the Board of Trade, in any case where a local authority are not the Undertakers, at any time after the commencement of the Special Order, have reason to believe that the Undertakers have made any default in executing works or supplying energy in accordance with the provisions of that Order, and that that default is in consequence of the insolvency of the Undertakers, and that by reason of that insolvency the Undertakers are unable fully and efficiently to discharge the duties and obligations imposed upon them by that Order, the Board of Trade may after such inquiry as they may think necessary, and after considering any representations of the local authority, revoke that Order as to the whole or (with the consent of the Undertakers) as to any part of the area of supply. Revocation of Order where Undertakers are insolvent.

In County of London Orders, the Board of Trade are required to consider representations of the County Council.

Some of the Power Acts exclude this section from incorporation.

**64.** If in any case where a local authority are not the Undertakers, the Undertakers at any time after the commencement of the Special Order represent to the Board of Trade that the undertaking cannot be carried on with profit, and ought to be abandoned, the Board of Trade shall inquire into the truth of the representation, and if upon that inquiry they are satisfied of the truth of the representation they may, if in their discretion they think fit, revoke the Special Order as to the Revocation of Order where undertaking cannot be carried on with profit.

**Schedule.** whole or (with the consent of the Undertakers and of the local authority)  
**Sect. 64.** as to any part of the area of supply.

In County of London Orders the consent of the County Council is also required.

Some of the Power Acts exclude this section from incorporation.

Revocation  
where local  
authority are  
Undertakers  
and works  
are not  
executed.

**65.** If in a case where the local authority are themselves the Undertakers, the Board of Trade, at any time after the commencement of the Special Order, have reason to believe that the Undertakers have made default in executing works or supplying energy in accordance with the provisions of the Special Order, the Board of Trade may, after such inquiry as they may think necessary, revoke the Special Order as to the whole or (with the consent of the Undertakers) any part of the area of supply upon such terms as the Board of Trade think just.

As to orders in favour of companies or persons, see s. 5, *ante*, p. 159.

Some of the Power Acts exclude this section from incorporation.

Revocation of  
Order with  
consent.

**66.** In addition to any other powers which the Board of Trade may have in that behalf, they may revoke the Special Order at any time with the consent and concurrence of the Undertakers, and, where the local authority are not themselves the Undertakers, also of the local authority upon such terms as the Board of Trade think just.

Some of the Power Acts exclude this section from incorporation.

Provisions  
where Order  
revoked.

**67.** If the Board of Trade, in any case where the local authority are not themselves the Undertakers, at any time revoke the Special Order as to the whole or any part of the area of supply, under any of the provisions of the Special Order, the following provisions shall have effect :—

- (a.) The Board of Trade shall serve a notice of the revocation upon the Undertakers and upon (a) the local authority, and shall in that notice fix a date at which the revocation shall take effect, and from and after that date all the powers and liabilities of the Undertakers under the Special Order or this Act, for the supply of energy within such area, or part thereof as aforesaid, shall absolutely cease and determine.
- (b.) Within two months after the service of the notice by the Board of Trade upon the local authority, the local authority, if they think fit, may by notice in writing require the Undertakers to sell, and thereupon the Undertakers shall sell, to them so much of the Undertaking or such part thereof as aforesaid as is within the district of the local authority, upon terms of paying the then value of all land, buildings, works, materials, and plant of the Undertakers suitable to and used by them for the purposes of the undertaking or such part thereof as aforesaid, that value being agreed or estimated in manner directed by



the Electric Lighting Act, 1888, in the case of purchases effected by the local authority under section two of that Act.

**Schedule.  
Sect. 67.**

(c.) Where any purchase is so effected, the undertaking, or part thereof so purchased, shall vest in the local authority, freed from any debts, mortgages, or similar obligations of the Undertakers, or attaching to the undertaking; and the revocation of the Special Order, as to the whole of the area of supply, or such part thereof as aforesaid, shall extend only to the revocation of the rights, powers, authorities, duties, and obligations of the Undertakers from whom the undertaking, or such part thereof as aforesaid, is purchased in relation to the supply of energy within that area or part thereof, and, save as aforesaid, the Special Order shall remain in full force within that area or part thereof in favour of the local authority, by whom the undertaking or part thereof is purchased as aforesaid.

(d.) Where no purchase has been effected under the preceding provisions of this section, the local authority, and any body or person who may be liable to repair any street or part of a street in which any works of the Undertakers have been placed, may (subject however to any agreement between the local authority or that body or person and the Undertakers providing for the removal of those works by the Undertakers) forthwith remove those works with all reasonable care, and the Undertakers shall pay to the local authority, or other such body or person as aforesaid, such reasonable costs of the removal, and of the reinstatement of the street or part of a street as may be specified in a notice to be served on the Undertakers by the local authority or other body or person, or (if so required by the Undertakers, within one week after the service of the notice upon them) as may be determined by arbitration.

If the Undertakers fail to pay such reasonable costs as aforesaid within one month after the service upon them of the notice, or the delivery of the award of the arbitrator (as the case may be), the local authority, or other such body or person as aforesaid, may, without any previous notice to the Undertakers (but without prejudice to any other remedy which they may have for the recovery of the amount), sell and dispose of any such works as aforesaid, either by public auction or private sale, and for such sum or sums and to such person or persons as they may think fit; and may, out of the proceeds of the sale, pay and reimburse themselves the amount of the costs so specified or settled as aforesaid and of the costs of sale, and the balance (if any) of the proceeds of the sale shall be paid over by them to the Undertakers.

(e.) In case the local authority or any body or person may be

**Schedule.**  
**Sect. 67.**

entitled to compensation for any damage sustained by them by reason or in consequence of the execution of any works within such area, or part thereof as aforesaid, or the exercise of any powers granted by the Special Order to the Undertakers, or for any expenses to which that local authority, body, or person may have been put in removing any works of the Undertakers within the area, or part thereof, under the provisions of the Special Order, that compensation shall be a first charge on any money that may have been deposited or secured by the Undertakers under the provisions of the Special Order in respect of that area, or part thereof, and which may not have been repaid or released to the Undertakers, and that money shall be applied rateably in satisfying those claims, and in every such case the amount of compensation to be paid in respect of the various claims, and the persons to whom it is to be paid, shall be determined by arbitration.

(a) In County of London Orders, the words "County Council and the" are here inserted.

Some of the Power Acts exclude this section from incorporation.

Provisions  
where local  
authority are  
Undertakers  
and Order is  
revoked.

**68.**—(1.) If the Board of Trade, in a case where the local authority are themselves the Undertakers, at any time revoke the Special Order as to the whole or any part of the area of supply, any persons who may be liable to repair any street or part of a street within that area or part thereof in which any works of the Undertakers have been placed, may forthwith remove those works with all reasonable care, and the Undertakers shall pay to those persons such reasonable costs of the removal as are specified in a notice to be served on the Undertakers by those persons, or if so required by the Undertakers within one week after the service of the notice upon them as may be determined by arbitration.

(2.) If the Undertakers fail to pay such reasonable costs as aforesaid within one month after the service upon them of such notice or the delivery of the award of the arbitrator (as the case may be), such persons as aforesaid may without any previous notice to the Undertakers (but without prejudice to any other remedy which they may have for the recovery of the amount), sell and dispose of any such works as aforesaid either by public auction or private sale, and for such sum or sums and to such person or persons as they think fit, and may out of the proceeds of the sale pay and reimburse themselves the amount of the costs so specified or determined as aforesaid, and of the costs of sale, and the balance (if any) of the proceeds of the sale shall be paid over by them to the Undertakers.

Cf. the preceding section. It will be observed that the present section is confined to the removal of the undertakers' works from the streets, and the expenses attending the same.

Some of the Power Acts exclude this section from incorporation.

## GENERAL.

Schedule.  
Sect. 69.Remedying of  
system and  
works.

**69.**—(1.) If at any time it is established to the satisfaction of the Board of Trade—

- (a) that the Undertakers are supplying energy otherwise than by means of a system which has been approved by the Board of Trade or (except in accordance with the provisions of the Special Order) have permitted any part of their circuits to be connected with earth or placed any electric line above ground ; or
- (b) that any electric lines or works of the Undertakers are defective, so as not to be in accordance with the provisions of the Special Order or the Board of Trade regulations ; or
- (c) that any work of the Undertakers or their supply of energy is attended with danger to the public safety, or injuriously affects any telegraphic line of the Postmaster-General,

the Board of Trade may by order specify the matter complained of, and require the Undertakers to abate or discontinue it within such period as is therein limited in that behalf, and if the Undertakers make default in complying with the order they shall be liable to a penalty not exceeding twenty pounds for every day during which the default continues.

(2.) The Board of Trade may also if they think fit by the same or any other order forbid the use of any electric line or work as from such date as may be specified in that behalf until the order is complied with, or for such time as may be so specified, and if the Undertakers make use of any such electric line or work while the use thereof is so forbidden they shall be liable to a penalty not exceeding one hundred pounds for every day during which the user continues.

(3.) In any case of non-compliance with an order under this section, whether a pecuniary penalty has been recovered or not, the Board of Trade, if in their opinion the public interest so requires, may revoke the Special Order on such terms as they think just.

**70.**—(1.) The Board of Trade regulations for the time being in force shall within one month after they have come into force, as made or last altered, be printed at the expense of the Undertakers, and a true copy thereof, certified by or on behalf of the Undertakers, shall be kept by the Undertakers at their principal office within the area of supply, and supplied to any person demanding them at a price not exceeding sixpence for each copy, and where the local authority are not themselves the Undertakers, a like copy shall also be forthwith served upon the local authority (a).

Publication  
of regula-  
tions.

(2.) If the Undertakers make default in complying with the provisions of this section they shall be liable to a penalty not exceeding five pounds, and to a daily penalty not exceeding five pounds.

(a) Under County of London Orders the County Council are also entitled to be served with a copy.

**Schedule.**  
**Sect. 71.**

Nature and  
amount of  
security.

71. Where any security is required under the Special Order to be given to or by the Undertakers, that security may be by way of deposit or otherwise, and of such amount as may be agreed upon between the parties, or as in default of agreement may be determined, on the application of either party, by a court of summary jurisdiction, and that court may also order by which of the parties the costs of the proceedings before them shall be paid, and the decision of the court shall be final and binding on all parties : Provided that where any such security is given by way of deposit the party to whom the security is given shall pay interest at the rate of four per centum per annum on every sum of ten shillings so deposited for every six months during which it remains in their hands.

Proceedings  
of Board of  
Trade.

72.—(1.) All things required or authorised under the Special Order to be done by, to, or before the Board of Trade, may be done by, to, or before the President or a secretary or assistant secretary of the Board.

(2.) All documents purporting to be orders made by the Board of Trade and to be sealed with the seal of the Board, or to be signed by a secretary or assistant secretary of the Board, or by any person authorised in that behalf by the President of the Board, shall be received in evidence, and shall be deemed to be those orders without further proof, unless the contrary is shown.

(3.) A certificate, signed by the President of the Board of Trade, that any order made or act done is the order or act of the Board, shall be conclusive evidence of the order or act so certified.

Approval or  
consent of  
Board of  
Trade.

73.—(1.) Where the Special Order provides for any consent or approval of the Board of Trade, the Board may give that consent or approval subject to terms or conditions, or may withhold their consent or approval, as in their discretion they may think fit.

(2.) All costs and expenses of or incident to any approval, consent, certificate, or order of the Board of Trade or of any inspector or person appointed by the Board of Trade, including the cost of any inquiry or tests for the purpose of determining whether the same should be given or made, to such an amount as the Board of Trade certify to be due, shall be borne and paid by the applicant therefor.

Provided that where any approval is given by the Board of Trade to any plan, pattern, or specification, they may require such copies of the plan, pattern, or specification as they think fit to be prepared and deposited at their office at the expense of the applicant, and may, as they think fit, revoke any approval so given, or permit the approval to be continued, subject to such modifications as they think necessary.

Notice of  
approval of  
Board of  
Trade, etc.,  
to be given  
by advertise-  
ment.

74. Where the Board of Trade—

(1) upon the application of the Undertakers, give any approval or grant any extension of any time limited for the performance of any duties by the Undertakers ; or

Schedule.  
Sect. 74.  
—

- (2) in a case where the local authority are not themselves the Undertakers, revoke the Special Order upon the application of (a) the local authority or the Undertakers as to the whole or any part of the area of supply; or
- (3) in a case where the local authority are themselves the Undertakers revoke the Special Order as to the whole or any part of the area of supply,

notice that the approval has been given, or the extension of time granted, or the revocation made, shall, if the Board of Trade so direct, be published by public advertisement once at least in each of two successive weeks in some one and the same local newspaper by the Undertakers, or, where the application for revocation has been made by the local authority, by the local authority.

(a) In County of London Orders, the words "the County Council or" are here added.

75. If, in a case where the local authority are not themselves the Undertakers, any application is made to the Board of Trade to extend any time limited for the performance of any duties by the Undertakers, notice of the application shall be served on the local authority by the Undertakers, and an opportunity shall be given to the local authority to make representations or objections with reference thereto.

Notice of application for extension of time, etc., to be given to local authority.

In County of London Orders the notice is required to be served on the County Council, who may also make representations.

The Power Acts, as a rule, exclude this section from incorporation.

76.—(1.) All penalties, fees, expenses, and other moneys recoverable under the Special Order, or under the Board of Trade regulations, the recovery of which is not otherwise specially provided for, may be recovered summarily in manner provided by the Summary Jurisdiction Acts.

Recovery and application of penalties.

(2.) Any penalty recovered on prosecution by an officer of the local authority, in a case where the local authority (a) are not themselves the Undertakers, shall, if there is an electric inspector for the time being appointed by the local authority (a), be paid to that officer and by him to the local authority, and shall be applied in aid of the local rate (b).

(3.) Any penalty recovered on prosecution by any other body or person, or any part thereof, may, if the court so direct, be paid to that body or person (c).

(a) In County of London Orders, the County Council.

(b) Where the County Council recover the penalty it is carried to, the county fund.

**Schedule.  
Sect. 76.**

NOTE.

(c) In County of London Orders there is an additional paragraph in this section, viz. :—

“ Save as aforesaid all penalties recovered summarily under this order shall be applied according to the law regulating the application of penalties so recovered within the metropolitan police district.”

Undertakers  
to be respon-  
sible for all  
damages.

**77.** The Undertakers shall be answerable for all accidents, damages, and injuries happening through the act or default of the Undertakers, or of any person in their employment, by reason of or in consequence of any of the Undertakers' works, and shall save harmless all authorities, bodies, and persons by whom any street is repairable, and all other authorities, companies, and bodies collectively and individually, and their officers and servants, from all damages and costs in respect of those accidents, damages, and injuries.

As to  
mortgages.

**78.** Nothing in the Special Order shall prevent the Undertakers, in a case where a local authority are not the Undertakers, from borrowing money on the security of mortgages of the undertaking, or shall make the consent or approval of the Board of Trade necessary to the validity or effect of any such mortgage :

Provided that every mortgage of the undertaking shall be deemed to comprise all purchase money which may be paid to the Undertakers in the event of any sale or transfer of the undertaking or any part thereof, under section two of the Electric Lighting Act, 1888, or under the Special Order, and that any mortgage granted by the Undertakers shall not be a charge upon the undertaking, or any part thereof, in the event of the undertaking or that part being sold or transferred as aforesaid, and that every mortgage deed granted by the Undertakers shall be endorsed with notice to that effect.

The above section, as a rule, is not incorporated with the Power Acts, which contain power to create and issue debenture stock and incorporate Part III. of the Companies Clauses Act, 1863.

Saving for  
Postmaster-  
General.

**79.** Nothing in the Special Order shall affect any right or remedy of the Postmaster-General under the principal Act or the Telegraph Acts, 1863 to 1897, and all provisions contained in the Special Order in favour of the Postmaster-General shall be construed to be in addition to and not in modification of the provisions of those Acts.

See notes to s. 26 of the Electric Lighting Act, 1882, *ante*, p. 124.

Saving rights  
of the Crown  
in the  
foreshore.

**80.** Although any shore, bed of the sea, river, channel, creek, bay, or estuary is included in the area of supply, nothing in the Special Order shall authorise the Undertakers to take, use, or in any manner interfere with any portion of that shore or bed of the sea, or of the river, channel, creek, bay, or estuary, or any right in respect thereof

belonging to the Queen's most Excellent Majesty in right of Her Crown, and under the management of the Board of Trade, without the previous consent in writing of the Board of Trade on behalf of Her Majesty (which consent the Board of Trade may give), neither shall anything in the Special Order contained extend to take away, prejudice, diminish, or alter any of the estates, rights, privileges, powers, or authorities vested in or enjoyed or exerciseable by the Queen's Majesty.

Schedule.  
Sect. 80.

81. Nothing in the Special Order shall exonerate the Undertakers from any indictment, action, or other proceedings for nuisance in the event of any nuisance being caused or permitted by them.

Undertakers  
not exempted  
from proceed-  
ings for  
nuisance.

With respect to this subject Lord Cross's Committee of 1898 reported as follows: "With respect to liability for nuisance, they are of opinion that where the site for a generating station is acquired under compulsory powers and is specified in the Provisional Order or Special Act the Undertakers should not be subjected to any further liability than that which according to Lord Blackburn (*Geddis v. Bann Reservoir*, 8 App. Cas. 455) is imposed by the common law in the case of persons exercising statutory powers and duties. On the other hand where the site for a generating station is acquired by agreement they think the Undertakers ought to be subject to the liability imposed by the common law." Several of the Power Acts incorporate the section in the text. In the County of Durham, North Metropolitan, and Newcastle-upon-Tyne Acts, the section is excluded from incorporation. In the Yorkshire, Derbyshire, and Nottinghamshire and Cornwall Acts, the section is incorporated with the qualification that it "shall not apply to any generating station or works erected on any of the lands described in the First Schedule to this Act." See this subject more fully considered, *ante*, pp. 19, 61—70.

By s. 24 sub-s. (b) of the Public Health (London) Act, 1891, "Any chimney (not being the chimney of a private dwelling house) sending forth black smoke in such quantity as to be a nuisance" is a nuisance liable to be dealt with summarily under the Act. Upon the hearing of complaints under this section it was proved that black smoke issued from the chimney of an electric generating station several times a day during a series of days for periods varying from a few minutes to upwards of an hour:—*Held*, that upon these facts the magistrate was justified in finding that the smoke issued "in such quantity as to be a nuisance," although there was no evidence that any particular person or property was injuriously affected thereby (*South London Electric Supply Corporation v. Perrin*, [1901] 2 K. B. 186). The Central London Railway Company were summoned at the West London Police Court to answer seven summonses by the Hammersmith Borough Council in respect of nuisance from the emission of "black smoke" from their two shafts at their generating station, Wood Lane, Shepherd's Bush. A penalty was imposed on each summons with costs (*Hammersmith Borough Council v. Central London Railway Co., Electrician*, December 14th, 1900, p. 292). The same company were again summoned (five summonses) for creating a nuisance by allowing black smoke to issue from the shafts of the same station at Wood Lane, Shepherd's Bush. The company called evidence to show that the best

Black smoke.

**Schedule.**  
**Sect. 81.**  
—

appliances known to engineers were employed at the works, and that grey smoke might be mistaken for black smoke, and that the number of economisers in the flues would prevent the issuing of black smoke. The magistrate (Mr. Rose) said he was satisfied that the best appliances were used, but that he was not satisfied that the best kind of coal was used on some occasions. A fine of £5 was imposed on each summons with costs (*Hammersmith Borough Council v. Central London Railway Co., Electrician*, February 1st, 1901, p. 558). Penalties on each of ten summonses with costs was imposed in respect of nuisance by black smoke from the shaft of a generating station of the South London Electric Supply Corporation (*Lambeth Borough Council v. South London Electric Supply Corporation, Electrician*, December 14th, 1901, p. 292). There have been many similar convictions in respect of black smoke.

Provision as  
to general  
Acts.

**82.** Nothing in the Special Order shall exempt the Undertakers or their undertaking from the provisions of, or deprive the Undertakers of the benefits of, any general Act relating to electricity, or to the supply of, or price to be charged for, energy, which may be passed after the passing of the Act confirming the Special Order.

See s. 4 of the Act of 1882, *ante*, p. 92.

APPLICATION TO SCOTLAND.

Application  
to Scotland.

**83.** In the application of the provisions of this schedule to Scotland the following modifications shall be made :—

- (1.) The expression “arbitrator” shall be substituted for the expression “arbitrator.”
- (2.) “The sheriff of the county or any of his substitutes” shall be substituted for “a court of summary jurisdiction.”
- (3.) References to recovery summarily as a civil debt shall be construed as references to recovery summarily.
- (4.) The expression “complainant” shall be substituted for the expression “complainer,” and the expression “defender” for the expression “defendant.”
- (5.) “The Secretary for Scotland” shall be substituted for “the Local Government Board.”
- (6.) The reference to section two hundred and sixty-five of the Public Health Act, 1875, shall not apply.
- (7.) A reference to the Edinburgh Gazette shall be substituted for a reference to the London Gazette.

38 & 39 Vict.  
c. 55.

APPLICATION TO IRELAND.

Application  
to Ireland.

**84.** In the application of the provisions of this schedule to Ireland the following modifications shall be made :—

- (1.) References to recovery summarily as a civil debt shall be construed as references to recovery before a court of summary jurisdiction.



- (2.) A reference to section two hundred and sixty-four of the Public Health (Ireland) Act, 1878, shall be substituted for a reference to section two hundred and sixty-five of the Public Health Act, 1875, and in the construction of that section, as incorporated in this schedule, "sanitary authority" shall mean "the local authority as Undertakers." **Schedule. Sect. 84.**  
41 & 42 Vict. c. 52.  
38 & 39 Vict. c. 55.
- (3.) Where the repair of any street or public bridge in a rural district is a public work within the meaning of the Local Government (Ireland) Act, 1898, that street or bridge shall, for the purpose of the provisions of this schedule, be deemed to be repairable by the county council and not by the district council. 61 & 62 Vict. c. 37.
- (4.) A reference to the Local Government Board for Ireland shall be substituted for a reference to the Local Government Board.
- (5.) A reference to the Dublin Gazette shall be substituted for a reference to the London Gazette.

### APPENDIX.\*

*Section 12 of the Electric Lighting Act, 1882 (45 & 46 Vict. c. 56).*

12. The provisions of the following Acts shall be incorporated with this Act; that is to say,—

- |      |  |   |   |   |   |  |
|------|--|---|---|---|---|--|
| *    | *  | * | * | * | * | Incorporation of certain provisions of Clauses Consolidation Acts.<br>10 & 11 Vict. c. 15.<br><br>34 & 35 Vict. c. 41. |
|      |  |   |   |   |   |  |
| (2.) | The provisions of the Gasworks Clauses Act, 1847, with respect to breaking up streets for the purpose of laying pipes, and with respect to waste or misuse of the gas or injury to the pipes and other works, except so much thereof as relates to the use of any burner other than such as has been provided or approved of by the Undertakers; and |   |   |   |   |  |
| (3.) | Sections thirty-eight to forty-two inclusive, and sections forty-five and forty-six of the Gasworks Clauses Act, 1871.   |   |   |   |   |  |

For the purposes of this Act in the construction of all the enactments incorporated by this section "the special Act" means this Act inclusive of any licence, order, or special Act; and the "promoters" or "undertakers," and "the undertaking," as the case may be, mean the undertakers and the undertaking respectively under this Act.

\* \* \* \* \*

In the construction of the said Gasworks Clauses Act, 1847, and the Gasworks Clauses Act, 1871, the said Acts shall be construed as if "gas" meant "electricity," and as if "pipe"

\* This Appendix is referred to in s. 11 of the Schedule to the Act of 1899. See p. 164.

**Appendix.**

meant "electric line," and "works" meant "works" as defined by this Act, and as if "the limits of the special Act" meant the area within which the Undertakers are authorised to supply electricity under any licence, order, or special Act.

All offences, forfeitures, penalties, and damages under the said incorporated provisions of the said Acts or any of them may be prosecuted and may be recovered in manner by the said Acts respectively enacted in relation thereto, provided that sums recoverable under the provisions of section forty of the Gasworks Clauses Act, 1871, shall not be recovered as penalties, but may be recovered summarily as civil debts.

See the notes, *ante*, p. 229.

*Sections of the Gasworks Clauses Act, 1847 (10 & 11 Vict. c. 15),  
incorporated.*

And with respect to the breaking up of streets for the purpose of laying pipes, be it enacted as follows:—

Power to  
break up  
streets, etc.,  
under  
superinten-  
dence, and  
to open  
drains.

6. The Undertakers, under such superintendence as is herein-after specified, may open and break up the soil and pavement of the several streets and bridges within the limits of the special Act, and may open and break up any sewers, drains, or tunnels within or under such streets and bridges, and lay down and place within the same limits pipes, conduits, service pipes, and other works, and from time to time repair, alter, or remove the same, and also make any sewers that may be necessary for carrying off the washings and waste liquids which may arise in the making of the gas, and for the purposes aforesaid may remove and use all earth and materials in and under such streets and bridges, and they may, in such streets, erect any pillars, lamps, and other works, and do all other acts which the Undertakers shall from time to time deem necessary for supplying gas to the inhabitants of the district included within the said limits, doing as little damage as may be in the execution of the powers hereby or by the special Act granted, and making compensation for any damage which may be done in the execution of such powers.

What is a  
"street."

The word "street" is defined by s. 8 of the Gasworks Clauses Act, 1847, to "include any square, court, or alley, highway, lane, road, thoroughfare, or public passage or place, within the limits of the special Act."

Section 82 of the Electric Lighting Act, 1882, provides that "the expression 'street' includes any square, court, or alley, highway, lane, road, thoroughfare, or public passage, or place, within the area in which the Undertakers are authorised to supply electricity by this Act or any license, order, or special Act."

In the case of an ordinary highway, although it may be of a varying and unequal width running between fences one on each side, the right of passage or way *primâ facie*, and unless there be evidence to the contrary, extends to the whole space between the fences; and the public are entitled to the use of the whole of it as the highway, and are not confined to the part which

may be metalled or kept in order for the more convenient use of carriages and foot passengers. Hence the placing of telegraph posts on the greensward at the side of a highway so as to obstruct the right of passage which the public have over the whole space between the fences, is an indictable nuisance (*R. v. United Kingdom Telegraph Co.* (1862), 81 L. J. M. C. 166; and see *Wilkins v. Day* (1888), 12 Q. B. D. 110; *Curtis v. Kesteven County Council* (1890), 45 Ch. D. 504; and *Locke King v. Woking Urban District Council* (1898), 77 L. T. 790; *Neeld v. Hendon U. D. C.* (1899), 81 L. T. 405). Cf. *Countess of Belmore v. Kent C. C.*, [1901] 1 Ch. 878, and *Neaverson v. Peterborough R. D. C.*, [1902] 1 Ch. 557.

Without the express power to break up streets given by s. 6, *supra*, it is unlawful for anyone, other than the road authority, to open and break up the soil and pavements of streets and bridges. The doing so constitutes a public nuisance, for which an indictment will lie (*R. v. Longton Gas Co.* (1860), 2 E. & E. 651; *S. C. sub nom. R. v. Knight* (1860), 6 Jur. (N.S.) 601).

Injunction may also be obtained to restrain the breaking up of streets for the purpose of laying pipes in the absence of Parliamentary authority, but the courts have generally declined to grant an injunction where the inconvenience to the public is of a trivial or temporary character (*Att.-Gen. v. Sheffield Gas Consumers Co.* (1858), 8 De G. M. & G. 809; *R. v. Sheffield Gas Consumers Co.* (1858), 18 Jur. 146, n.; *Goldsmid v. Tunbridge Wells Improvement Commissioners* (1866), L. R. 1 Ch. 849; *Att.-Gen. v. Cambridge Consumers Co.* (1868), L. R. 4 Ch. 71). The consent of the road authority does not legalise what would otherwise be a public nuisance. (See cases above cited.) In *Edgware Highway Board v. Harrow District Gas Co.* (1874), L. R. 10 Q. B. 92, BLACKBURN, J., said: "I do not think that the licence to open the highway is necessarily a licence to commit an indictable offence. It is quite possible to open the highway within the terms of the agreement without creating a nuisance."

Where proceedings for injunction are taken otherwise than by the road authority, the chance of success is enhanced if the consent of the Attorney-General be obtained and the proceedings be taken in his name on the relation of the parties complaining. (See *Stockport District Water Co. v. Corporation of Manchester* (1868), 9 Jur. (N.S.) 266, and *Pudsey Coal Gas Co. v. Corporation of Bradford* (1878), L. R. 15 Eq. 167, and also the other cases cited above.)

For breaking up streets without parliamentary authority penalties may be recovered under the Highway Act, 1835 (5 & 6 Will. 4, c. 50), s. 72 (*Hawkins v. Robinson* (1878), 87 J. P. 662).

Penalties may also be recovered under the Public Health Act, 1875, s. 149, which provides that all streets being, or which at any time become, highways repairable by the inhabitants at large within any urban district shall vest in and be under the control of the urban authority. Section 149 further enacts that "any person who without the consent of the urban authority wilfully displaces or takes up or who injures the pavement stones, materials, fences, or posts, or of the trees in any such street shall be liable to a penalty not exceeding £5, and to a further penalty not exceeding 5 shillings for every square foot of pavement stones or other materials so displaced, taken up or injured; he shall also be liable in case of any injury to trees to pay to the local authority such amount of compensation as the court may award."

## Appendix.

### NOTE.

Consequences of breaking up streets without parliamentary authority

Indictment.  
Injunction.

Penalties under Highway Act, 1835.

Penalties under Public Health Act, 1875.

**Appendix.**

NOTE.  
Telephone  
wires.

A telephone company having placed wires on the roofs of houses and passed them diagonally across a street, the local authority took proceedings to obtain an injunction. It was found at the trial that there was no danger and no nuisance. The streets were vested in the local authority under s. 96 of the Metropolis Management Act, 1855. The injunction was refused (*Wandsworth District B. of W. v. United Telephone Co.* (1884), 13 Q. B. D. 904). See this case more fully set forth, *ante*, p. 110.

A telephone company brought an action against the Constables of St. Peter Port, Guernsey, to recover damages for the cutting down and removal of telephone wires stretched across a public street. The company was not authorised by statute so to place their wires:—*Held*, that the removal was within the legal powers of the constables, there being no allegation of any unnecessary damage having been caused by the cutting (*National Telephone Co. v. Constables of St. Peter Port*, [1900] A. C. 817).

Electric  
feeders under  
footway to  
tramways.

A company were authorised by provisional order under the Tramways Act, 1870, to construct a tramway to be worked by "any animal power, and with the consent in writing of the Board of Trade, by means of any electrical or other mechanical power applied according to a system approved by the Board of Trade." The Board of Trade approved of a system which involved the laying of electric feeders under the footways of the streets traversed. The company having proceeded to carry out the necessary work, the municipal authority, being also the road authority, brought an action for injunction and damages in respect of the breaking up of the footways. It was conceded that under ss. 8 and 26 of the Tramways Act, 1870, there was no power to break up footways. For justification, the defendants relied on s. 25 of their provisional order, which enacted that:—"Subject to the provisions of this Order, the promoters may place and maintain on any street or road in which any of the tramways may be laid such posts and overhead electric wires as may be necessary and proper for working such tramways by electrical power." The Court of Appeal held that these words did not authorise the laying under the footways of underground electric wires or feeders (*Mayor, &c., of Hyde v. Oldham, Ashton, and Hyde Electric Tramway Co., Limited* (1900), 64 J. P. 598).

Pole and fuse-  
box of tram-  
way in  
footway.

By the Liverpool Corporation Tramways Act, 1897, the corporation were authorised to acquire the undertaking of the Liverpool United Tramways and Omnibus Co., which had been authorised by provisional order under the Tramways Act, 1870, and which had been worked by horse-power. The Act recited that the corporation were the undertakers for supplying electric power or energy within parts of the city, and that it was expedient to authorise the use of electric or other mechanical power on the said tramway lines. Section 86 enacted that the corporation "may repair, alter, and reconstruct the tramways or any of them as they may see fit, and may construct, erect, lay down, and maintain in, over, or under the surface of any street, all such works as may be necessary or expedient for the purposes of adapting the tramways or any of them to the use of mechanical power," the last expression being defined by s. 3 to include electric power. For the purpose of carrying a wire in connection with the tramway, the corporation placed a pole and a fuse-box on the footway of a certain street close to the plaintiffs' premises. The plaintiffs complained that these prejudicially affected the conduct of their business, and sought an injunction to have them removed. It was contended on their behalf that the work complained

of was not authorised by the Act of 1897, and that under the Tramways Act, 1870, ss. 3 and 26, there was no power to interfere with the footway. The Court of Appeal held the corporation had acted within their rights under s. 86 of the Act of 1897 (*Goldberg and Son, Limited v. Mayor, &c., of City of Liverpool* (1900), 82 L. T. 862).

## Appendix.

## NOTE.

The Public Health Act, 1875, s. 149, vests certain streets in the urban authority, but does not vest the sub-soil. Therefore where a local Act authorised the urban authority to erect and maintain "in any street or public place, or on land belonging to them, or under their control," lavatories for the use of the public, it was held by the House of Lords that the urban authority had no power to excavate the soil and erect lavatories below the surface of a street which had vested in them within the meaning of the Public Health Act, 1875 (*Mayor, &c., of Tunbridge Wells v. Baird*, [1896] A. C. 484). In a subsequent case it was held that the same principle applied to the similar vesting in a local authority under s. 96 of the Metropolis Management Act, 1855, so that the soil of a street is vested in a vestry under s. 96 only so far "as is necessary for the control, protection, and maintenance of the street as a highway for public use." Therefore where an electric lighting company had illegally broken up the surface of a street within the district of a vestry in the metropolis and placed their pipes and wires at a depth of about two feet below the surface, it was held that the vestry were not by virtue of s. 96 the owners of the soil of the street at that depth, and that although the company had acted illegally in breaking up the street, the vestry could not maintain an action for a mandatory injunction to compel the company to remove their pipes and wires, there being no continuing trespass upon or interference with any right of the vestry (*Vestry of St. Mary, Battersea v. County of London and Brush Provincial Electric Lighting Co., Limited*, [1899] 1 Ch. 474). For the unwarranted breaking up of the street the company were summoned at the police court and fined 2*l.* and 2*s.* costs (*Jl. of G. L.*, February 21st, 1899, pp. 481, 446; *Electrician*, February 24th, 1899, p. 621). See also *Finchley E. L. Co. v. Finchley U. D. C.*, *infra*, p. 217.

How far sub-soil of streets vested in road authority.

Where water pipes had without parliamentary authority been laid in the soil of a highway but without the consent of the owner of the *solum*, an injunction was granted to restrain the continuance of the pipes. The facts that the soil under the highway was of no value to the owner, and that his motive in applying to the court was not connected with the enjoyment of his land, were held not to be good reasons against the granting of the injunction (*Goodson v. Richardson* (1874), L. R. 9 Ch. 221; cf. *Bradford Corporation v. Pickles*, [1895] A. C. 587). In an earlier case where a telegraph company had, without any parliamentary powers, laid down their wires in tubes under a public highway, an information and bill were filed complaining of those acts as a nuisance to the public and as an invasion of the rights of the owner of the adjacent land in the soil of the road. The court refused to grant an injunction until the legal right had been established (*Att.-Gen. v. United Kingdom Electric Telegraph Co.* (1861), 80 Beav. 287).

Action by owner of *solum*.

A local board entered into a contract with an electric lighting company to light a town with electric light. No licence or provisional order from the Board of Trade or special Act had been obtained. The company erected poles and overhead wires under a licence from the local board. The defendant was owner in fee in possession of land fronting a public highway, and he alleged that the poles and wires interfered with certain building operations on his

Action by or against local authority.

**Appendix.****NOTE.**

land in immediate contemplation. He claimed as owner of the sub-soil of half the highway to remove or otherwise interfere with the electric wires and poles and to treat the local board and the electric lighting company as trespassers. On the application of the local board and the company, CHITTY, J., granted an injunction against the defendant, holding that the highway in question being a "street" within s. 149 of the Public Health Act, 1875, and being therefore vested in the local board, the local board were entitled to more than the surface, and had further an area of user necessary for the exercise of their statutory powers, *e.g.*, lighting their district; further, that under the first paragraph of s. 161 of the Public Health Act, 1875, the local board were authorised to "contract with any person for the supply of gas or other means of lighting the streets, markets, and public buildings in their district;" and further, that the restrictions contained in the subsequent paragraphs of s. 161 did not apply to lighting by other means than gas, but were only intended to prevent an urban authority from invading the district of a statutory gas company (*Fareham Local Board and Fareham Electric Lighting Co. v. Smith* (1891), 7 T. L. R. 448; W. N., [1891] 76). It appears from the judgment of CHITTY, J., in this case that the company had been indicted for a public nuisance in respect of the same matters, and that Lord COLERIDGE, L.C.J., directed the jury to acquit the defendants on the ground that the company were protected by the licence and authority of the local board, and that the local board were acting within their authority under s. 161.

In a Canadian case, it appeared that s. 5 of the respondent company's incorporating Act empowered it on certain conditions (which had been complied with) to lay its wires underground as the same might be necessary, and in so many streets, squares, highways, lanes, and public places as might be deemed necessary for the purpose of supplying electricity and gas:—*Held*, that the power to open streets, that is, to break up their surface, and excavate them, was plainly involved in this provision, and that an injunction obtained by the respondents to restrain the municipality from interfering therewith was properly granted (*City of Montreal v. Standard Light and Power Co.*, [1897] A. C. 527).

Arches, etc.,  
under  
carriageway.

Section 26 of the Public Health Act, 1875, imposes a penalty on any person who in any urban district, without the written consent of the urban authority, "causes any vault, arch or cellar to be newly built or constructed under the carriageway of any street," and authorises the urban authority to cause any building, vault, arch or cellar, erected or constructed in contravention of that section, to be altered, pulled down, or otherwise dealt with as they may think fit. The defendants, being lessees of land on both sides of and adjoining a certain street, made an arched concrete tunnel under the street for the purpose of laying pipes conveying electrical mains across the floor of the tunnel. Afterwards they changed their minds and dug through the concrete floor and laid the pipes in the clay below the concrete. The tunnel having been constructed without their consent, the local authority gave the defendants notice of their intention to pull it down under the powers of s. 26 of the Public Health Act, 1875. The defendants thereupon removed the top of the arch of the tunnel and filled the tunnel up with ballast and concrete, but they did not remove the floor of the tunnel. The local authority then brought an action claiming a declaration that they might properly cause the "arch, vault, or cellar" to be pulled down, etc. The defendants then brought a cross-action claiming injunction against interference

with their pipes. It appeared that the local authority had statutory power to supply electricity within the district, and that the defendants obtained current from a rival source. FARWELL, J., after hearing evidence, held that the place where the pipes were, was not part of the floor or of the structure and that the whole tunnel could be removed without interfering with the pipes, and he gave judgment for the local authority in their action and against them in the defendants' action for injunction (*Walker U. D. C. v. Wigham, Richardson & Co., Limited; Wigham, Richardson & Co., Limited v. Walker U. D. C.* (1901), 85 L. T. 579).

## Appendix.

NOTE.

An urban district council having obtained a provisional order empowering them to supply electric lighting, but who had not commenced to exercise their powers thereunder, obtained an injunction against a limited liability company (who had no provisional order or other statutory authority) restraining them from breaking up the streets without their consent. Afterwards the company, with the consent of the owners of land, placed posts on each side of a street and by that means carried overhead wires across the street; whereupon the urban district council caused the wires to be cut. The company commenced an action claiming injunction. Lord ALVERSTONE, L.C.J., sitting at Chambers as Vacation Judge, granted an interim injunction. At the trial of the action the urban district council claimed to be owners of the fee simple in the Regent's Park Road. The road had originally been made under a local Turnpike Act, the trustees having bought the land for the purpose. The turnpike trust came to an end in 1872, and the road thereupon became a main road, repairable by the inhabitants, under 41 & 42 Vict. c. 77, s. 18. The predecessors in title of the urban district council claimed under the Local Government Act, 1888, s. 11, sub-s. (2), to retain the maintenance of the road. FARWELL, J., held that the fee simple was in the urban district council, and refused an injunction (*Finchley E. L. Co., Limited v. Finchley U. D. C.*, [1902] 1 Ch. 866). On appeal, the Court of Appeal reversed this decision, holding that, assuming the fee simple to have been vested in the turnpike trustees, yet all that was vested in the urban district council under s. 149 of the Public Health Act, 1875, was the "street." A perpetual injunction was therefore granted restraining the defendants from severing or interfering with the lines and cables of the company (*Times*, February 12th, 1903).

Instance of  
fee simple  
claimed by  
road  
authority.

By the Telegraph Act, 1892, s. 5, where the Postmaster-General licenses any company or person to transmit any telegrams within the meaning of the Telegraph Acts, 1868 to 1889, he may authorise such company or person to exercise the powers which are conferred on the Postmaster-General by the Telegraph Acts, 1868 and 1878, subject to the conditions and provisos in the said section mentioned, including a proviso regarding consent of local authorities. Under the enactments referred to, the road authority can only raise objections or impose conditions as to matters which concern them as a road authority. Where the Postmaster-General had licensed the National Telephone Company to lay lines under certain streets in the City of London, and the Postmaster-General applied for consent of the Commissioners of Sewers as the road authority, the Commissioners of Sewers attached to their consent the condition that the line or lines of telegraph should not be "laid for the use of the National Telephone Company unless the telephone company were prepared to provide an improved service at a reduced cost." It was held

Postmaster-General and National Telephone Co.

**Appendix.****NOTE.**

Postmaster-  
General and  
National  
Telephone  
Co.—*contd.*

by the Railway Commissioners that such a condition could not lawfully be attached, inasmuch as it did not affect the corporation's interest as a street authority (*Postmaster-General v. London Corporation* (1898), 10 Ry. & Can. Traff. Cas. 284). As to the jurisdiction of the Railway Commissioners in such a matter, see the Telegraph Act, 1878 (41 & 42 Vict. c. 76), ss. 8 and 4. A similar decision was given by the Railway Commissioners in the case of *Postmaster-General v. Corporation of Glasgow* (1899), 10 Ry. & Can. Traff. Cas. 288, where the corporation refused their consent to the laying of wires by the Postmaster-General except on the condition "that such consent was not to be made applicable to the purposes of any private company or individual, whose application if made direct to the corporation could be refused by the corporation without right of appeal." The Corporation of Glasgow appealed to the First Division of the Court of Session; but it was there held that the appeal would not lie, the question being one of fact and not of law under s. 17 of the Railway and Canal Traffic Act, 1888; *ib.*

In the case of the *Postmaster-General v. Edinburgh Corporation* (1899), 10 Ry. & Can. Traff. Cas. 247, it was held that the fact of a municipal corporation having the ownership of the *solum* through which the wires are to be laid affords no reason for annexing pecuniary terms to their consent.

For a circular letter sent by the post office to clerks of vestries and district boards in the County of London relating to the powers of the National Telephone Company, see *Electrician*, November 10th, 1899, p. 84.

By the Telegraph Act, 1878 (41 & 42 Vict. c. 76), s. 4, any difference between the Postmaster-General and a road authority in regard to the placing of telegraphs and posts is to be determined by a stipendiary magistrate, or, where there is no such magistrate, the county court judge. By the Telegraph Act, 1892 (55 & 56 Vict. c. 59), s. 5, the Postmaster-General may authorise any company or person licensed by him to transmit telegrams, to exercise the powers conferred on the Postmaster-General by the Telegraph Acts, 1868 and 1878, and by that Act, or such of those powers as are specified in the licence. The Postmaster-General by a deed poll authorised the National Telephone Company to do certain specified works, and for that purpose to exercise all such powers as are conferred on the Postmaster-General by the Telegraph Acts, 1868 and 1878. By articles of agreement between the Corporation of Tunbridge Wells and the company, the corporation consented to the exercise by the company within the borough of powers with regard to those specified works, but the deed went on to stipulate that "except as regards the work mentioned in the schedule the company shall not exercise any of the powers conferred on the Postmaster-General by the Telegraph Acts, 1868 and 1878, in respect of which the consent of the corporation is required under the said Acts, without obtaining the further consent in writing of the corporation to be from time to time given to the specific works for the time being proposed to be carried out under such powers, it being intended that the general consent contained in the preceding clause is not to operate to relieve the company from the obligations of obtaining the particular consent of the corporation to such specific work as provided for and required by the said Acts." The telephone company having desired to open a new street and lay telephone wires not mentioned in the schedule to the deed, applied for the consent of the corporation. The corporation refused, whereupon the company applied to the county court judge under s. 4 of the Telegraph Act, 1878, to determine the difference. The Queen's Bench Division decided that



the county court judge had no jurisdiction to entertain the application, and that the corporation had under the agreement an absolute right to refuse their consent. They accordingly ordered a writ of prohibition to issue. On appeal this decision was affirmed (*National Telephone Company v. Tunbridge Wells Corporation* (1901), 85 L. T. 868). This decision also governed a similar case which raised the same point (*Huddersfield Corporation v. National Telephone Company, Electrician*, June 22nd, 1900, p. 885; and (on appeal) *Electrician*, May 8rd, 1901, p. 66).

The National Telephone Co. having claimed to be entitled to open the streets for the purpose of laying their telephone wires, not under the powers of the Telegraph Acts at all, but because they had the consents of the local authorities, an action was brought by the Attorney-General on the relation of the London County Council to restrain the company from opening the streets as being a nuisance. Ultimately the action was settled on the terms, *inter alia*, that the defendants were not entitled to lay any pipes, wires, cables or apparatus for telephonic purposes under any of the streets in the County of London unless by licence of the Postmaster-General under the Telegraph Acts and with the consents required by those Acts, and an injunction restraining the defendant company from opening any street or public road within the meaning of the Telegraph Acts, 1868—1899, within the administrative County of London without the consent of the Postmaster-General and the consent of the London County Council under the Telegraph Act, 1892 (*A.-G. v. National Telephone Co., Electrician*, July 20th, 1900, p. 492, and *Electrician*, July 27th, 1900, p. 581). See also *Electrician*, Nov. 18th, 1900, p. 187. In an earlier stage of the case an order was made by BUCKNILL, J., for the trial by a jury of the questions of fact raised as to whether the Telephone Company had caused any obstruction in the streets, and on appeal the Court of Appeal affirmed that order (*A.-G. v. National Telephone Co., Electrician*, July 20th, 1900, p. 492).

If a company or person obtains power by provisional orders to break up streets the local authority of the district may claim to exercise and may exercise the power under conditions provided. And so, too, where one local authority obtains power to break up streets in the district of another local authority the latter may claim to exercise and may exercise the power (s. 8 (9) of the Act of 1882, *ante*, p. 90, and s. 16 of schedule to the Electric Lighting (Clauses) Act, 1899, *ante*, p. 172).

Where a gas company employed a contractor to unlawfully break up a street it was held that the employer was responsible to third persons who sustained damage thereby, although if the act had been lawful they would not have been responsible for the negligence or misconduct of the contractor or his servant (*Ellis v. Sheffield Gas Consumers Co.* (1863), 2 E. & B. 267). Where a person employs a contractor to do work in a place where the public are in the habit of passing, which work will, unless precautions are taken, cause danger to the public, an obligation is thrown upon the person who orders the work to be done, to see that the necessary precautions are taken, and if the necessary precautions are not taken, he will be responsible for any injury arising therefrom (*Penny v. Wimbledon Urban District Council*, [1899] 2 Q. B. 72). N.B.—The road in the above case was a highway used by the public, but had not become repairable by the inhabitants at large (*ibid.*). A district council employed a contractor to construct a sewer. In consequence of his negligence in carrying out the work, a gas main was broken.

## Appendix.

### NOTE.

Postmaster-General and National Telephone Co.—*contd.*

Where road authority may exercise power of undertakers to break up streets.

Actions for negligence where contractor employed.

**Appendix.****NOTE.**

Actions for  
negligence  
where  
contractor  
employed—  
*contd.*

The gas escaped from it into the house in which the plaintiffs (a husband and wife) resided, and an explosion took place by which the wife was injured and the husband's furniture was damaged. The Court of Appeal held that the district council owed a duty to the public (including the plaintiffs) so to construct the sewer as not to injure the gas main; that they had been guilty of a breach of this duty; that, notwithstanding that they had delegated the performance of the duty to the contractor, they were responsible to the plaintiffs for the breach (*Hardaker v. Idle District Council*, [1896] 1 Q. B. 885). See *Gray v. Pullen* (1864), 5 B. & S. 970, being a decision of the Exchequer Chamber to a similar effect. The defendants, a telephone company, were lawfully engaged in laying telephone wires along a street. They passed the wires through tubes which they laid in a trench under the level of the pavement. The defendants contracted with a plumber to connect these tubes at the joints with lead and solder to the satisfaction of the defendants' foreman, at the sum of twelve shillings per joint. There was evidence that the work was done by the plumber under the supervision of the defendants' foreman, and that one of their men was assisting him in it. In order to make the connections between the tubes it was necessary to obtain a flare from a benzoline lamp, which could not be done without the application of heat to the lamp. The lamp used for the purpose was provided with a safety-valve. The plumber, for the purpose of obtaining the necessary flare, dipped the lamp into a caldron of melted solder, which was placed over a fire on the footway for the purpose of the work, and which was unprotected by any screen or tent. Dipping the lamp into the solder would have been a proper and usual mode of obtaining the flare provided the lamp had been in good order. The safety-valve of the lamp not being in working order, as the plumber ought to have known, the lamp exploded, with the result that the plaintiff, who was passing on the highway, was splashed by the molten solder and thereby injured. In an action by him against the defendants in the City of London Court for damages in respect of the injuries so occasioned to him, the deputy-judge held that the plumber was not doing the work as an independent contractor, but under the defendants' supervision and control, and that the defendants were responsible for his negligence as above mentioned:—*Held*, by the Court of Appeal (reversing the judgment of a Divisional Court), that the judgment of the deputy-judge was right on the grounds, first, that there was evidence that the defendants and the plumber were jointly engaged in the performance of the work under such circumstances as to render the defendants liable for the negligence of which the plumber had been guilty; and, secondly, that, even if the plumber were an independent contractor, the defendants, having authorised the performance upon a highway of work which from its nature was likely to involve danger to persons using the highway, were bound to take care that those who executed the work for them did not negligently cause injury to such persons (*Holliday v. National Telephone Co.*, [1899] 2 Q. B. 392). For other cases as to responsibility for contractors, see *Hughes v. Perceval* (1888), 8 App. Cas. 448; *Black v. Christchurch Finance Co.*, [1894] A. C. 48; *The Snark*, [1899] P. 74.

By the Telegraph Act, 1868 (26 & 27 Vict. c. 112), s. 6, the general powers of a telegraph company are set forth including power to open and break up streets. By s. 7 it is provided that in the exercise of the powers given by s. 6 the company shall do as little damage as may be and shall make full compensation to all bodies and persons interested for all damage sustained by them by reason or in consequence of the exercise of such powers, the

amount and application of such compensation to be determined in manner provided by the Lands Clauses Consolidation Act, 1845, and the Lands Clauses (Scotland) Act, 1845, respectively, and any Act amending those Acts for the determination of the amount and application of compensation for lands taken or injuriously affected. By the Telegraph Act, 1868 (81 & 82 Vict. c. 110), s. 2, the Postmaster-General was empowered to purchase the undertakings of existing telegraph companies, and by s. 2 it was enacted that the words "the company" in the Telegraph Act, 1868, shall, in addition to the meaning assigned to it in that Act, mean the Postmaster-General. Contractors were employed by the Postmaster-General to lay down telephone wires under a street in which the mains of an electric lighting company were laid. The electric lighting mains were enclosed in culverts which were practically water-tight. During the operations one of the contractors' workmen struck with a pick-axe an old 2-inch service water pipe. The water quickly filled the trench and got inside the culvert. It speedily reached boiling point, and the joints were severed and a short circuit formed. The whole of the generating machinery at both stations was stopped and the supply of electric current suspended for half an hour throughout the district and for a full hour in the locality of the accident. A morning performance was in progress at the St. James's Theatre, which, save for a few gas burners, was in almost darkness for an hour. The Trocadero Restaurant was in the same predicament. Under agreement the plaintiff company had had to pay the Carlton Hotel Company a penalty of 10*l.* for interruption of supply; the actual expenditure by the electric light company in consequence of the accident was 165*l.* 10*s.* 6*d.*, less sums received for old wire, etc. In a claim by the electric lighting company to recover damages from the Postmaster-General, it was contended on his behalf that inasmuch as the damage was not done by the Postmaster-General "in the exercise of the powers given by s. 6 of the Telegraph Act, 1868," the plaintiffs could not recover. The jury found a verdict for the plaintiffs for 145*l.* 19*s.* 6*d.* (*St. James's and Pall Mall Electric Lighting Co. v. Postmaster-General*, *Times*, August 14th, 1902; *Jl. of G. L.*, August 19th, 1902, p. 508; *Electrician*, August 15th, 1902, p. 685; *El. Rev.*, August 22nd, 1902, p. 812).

Under the Tramways Act, 1870, s. 28, a tramway company is bound to keep in repair so much of the street or road as extends eighteen inches beyond the rails on either side of the tramway. A telephone company acting under licence from the Postmaster-General, are not bound, in such a case, to obtain the previous consent of the tramway company before proceeding to break up the street to lay wires, the tramway company not being a "landowner or other person liable for the repair" of the street within the meaning of s. 18 of the Telegraph Act, 1868 (*Bristol Tramways and Carriage Co. v. National Telephone Co.*, [1899] 2 Ch. 282). A tramway company has no right to break up the footway (*Hyde Corporation v. Oldham, Ashton and Hyde Electric Tramway Co.*, cited *ante*, p. 214).

The breaking up of streets for the purpose of laying water pipes is not a "work" within the meaning of the Workmen's Compensation Act, 1897 (60 & 61 Vict. c. 87), s. 7 (1). Decision of Judge Stonor. (*Bennett v. Aird*, *Journal of Gas Lighting*, October 17th, 1899, p. 945, and October 31st, 1899, p. 1,067).

Where gas pipes were laid under the authority of s. 6 of the Act of 1847, it was held that the company were entitled to a right of support as against

## Appendix.

### NOTE.

Actions for negligence where contractor employed—*contd.*

Tramway Co.

Workmen's Compensation Act, 1897.

Right to support.

**Appendix.****NOTE.**

the owner of subjacent minerals and his lessees; and that the company were liable to pay compensation under that section (*Normanton Gas Co. v. Pope* (1888), 52 L. J. Q. B. 829; and see *London and North Western Rail. Co. v. Evans*, [1893] 1 Ch. 16). By the Public Health Act, 1875 (Support of Sewers) Amendment Act, 1888 (46 & 47 Vict. c. 87), it is provided that the provisions of the Waterworks Clauses Act, 1847, ss. 18 to 27 (both inclusive), with respect to mines shall apply to any "sanitary work" of a local authority (s. 8). The expression "sanitary work" is defined to include, *inter alia*, works of "lighting" and to include "any fixtures, pipes, fittings, or apparatus connected with any such work and belonging to or used by the local authority." By s. 88 of the Electric Lighting Act, 1882, it is provided that "Nothing in this Act shall limit or interfere with the rights of any owner, lessee, or occupier of any mines or minerals lying under or adjacent to any road along or across which any electric line shall be laid to work such mines and minerals." See p. 184.

**Injury by steam rollers.**

Where gas pipes were laid sufficiently deep below the surface of a street to prevent their being injured by the ordinary mode of repair, and the road authority by the use of heavy steam rollers caused damage to the pipes, it was held that they were liable for the damage and to an injunction (*Gas Light and Coke Co. v. Vestry of St. Mary Abbots* (1885), 15 Q. B. D. 1; *Alliance and Dublin Consumers Gas Co. v. Dublin C. C.*, [1901] 1 Ir. R. 492).

**Injury by traction engine.**

Where injury was caused to water pipes properly laid by a traction engine and trucks attached, the water company recovered damages at the Watford County Court before Judge Sir Alfred Marten, K.C. (*Colne Valley Water Co. v. Bretherton, J. of G. L.*, May 20th, 1902, p. 1,864).

**Metropolitan subways.**

Under the London County Council (Subways) Act, 1898 (56 & 57 Vict. c. ccii.), companies having power of opening and breaking up streets are, under the conditions referred to in ss. 3, 4, and 6, prohibited from doing so in a street where there is a subway. By s. 24, it is provided that the Act "shall not apply to any pipe or wire authorised to be laid or placed by any provisional order or licence under the Electric Lighting Acts, 1882 and 1888, or under any special Act incorporating the said Acts, or (in respect of such wires) to any company authorised to lay or place the same." See also the Metropolitan Subways Act, 1868 (31 & 32 Vict. c. lxxx.). A special clause is generally inserted in County of London Provisional Orders enabling the County Council to require electric lines to be laid in such subways. In London County Council Acts it is usual to provide that the Subways Act, 1898, shall apply to the subways authorised by these Acts. See, *e.g.*, London County Council (General Powers) Act of 1899 (62 & 63 Vict. ch. cccxxvii.), s. 38. As to subways constructed within the City of London under the provisions of Part V. of the City of London (Various Powers) Act, 1900 (63 & 64 Vict. ch. cccxxviii.), with respect to "public service works" authorised to be constructed, byelaws dated July 10th, 1902, have been submitted to the Board of Trade for their approval under that Act. As to subways constructed by the Corporation prior to the passing of the last-mentioned Act, the Corporation have made regulations dated July 10th, 1902. For a list of such subways and their situation see the regulations.

**Special provisions in Act of 1899.**

Special provision is made in the Schedule to the Electric Lighting (Clauses) Act, 1899, with regard to the following matters: street boxes

(s. 18), the service of notice of works with plan on the Postmaster-General and local authority (s. 14), the execution of authorised works in streets not repairable by the local authority, or over or under any railway, tramway, or canal (s. 15), the execution by the street authority (where they desire it) of the powers of the Undertakers in relation to the breaking-up, filling-in, reinstating or making good of streets, etc. (s. 16), the alteration by the Undertakers of the position of pipes, wires, etc., under streets (s. 17), and the laying of electric lines (other than service lines) or other works near any sewer, drain, watercourse, etc., under the jurisdiction or control of the local authority on or near any main pipe, electric line or other work belonging to any gas, electric supply, or water company (s. 18).

See cases relating to the construction of street boxes and transformers cited under s. 18 of the Schedule to the Electric Lighting (Clauses) Act, 1899. See p. 166.

## Appendix.

### NOTE.

7. Provided always that nothing herein shall authorise or empower the Undertakers to lay down or place any pipe or other works into, through, or against any building, or in any land, not dedicated to public use without the consent of the owners and occupiers thereof; except that the Undertakers may at any time enter upon and lay or place any new pipe in the place of any existing pipe, in any land wherein any pipe hath been already lawfully laid down or placed in pursuance of this or the special Act or any other Act of Parliament, and may repair or alter any pipe so laid down.

Not to enter on private land without consent.

Section 18 of the Electric Lighting Act, 1882, contains a special restriction on the breaking up of any street not repairable by the local authority or any railway or tramway without consent, unless in pursuance of special powers in that behalf inserted in the licence, order or special Act, or with the written consent of the Board of Trade, and also prescribes certain conditions precedent to such special powers or consent. See *ante*, p. 106.

It is provided by s. 21 (8) of the Schedule to the Electric Lighting (Clauses) Act, 1899, that when any requisition is made in respect of any street not repairable by the local authority, which the Undertakers are not specially authorised to break up by the Special Order, the Undertakers shall (unless the authority, or person by whom that street is repairable, consent to the breaking up thereof) forthwith apply to the Board of Trade under s. 18 of the Electric Lighting Act, 1882, for the written consent of the Board authorising and empowering the Undertakers to break up that street, and the requisition shall not be binding upon them if the Board of Trade refuse their consent in that behalf. See p. 181.

Where without parliamentary authority, and without the consent of the owners of the sub-soil of a public highway, water pipes were laid in such sub-soil, the owner was held entitled to an injunction to restrain the continuance of the pipes (*Goodson v. Richardson* (1874), L. R. 9 Ch. 221).

Where certain arches, used as cellars, adjoining the plaintiff's premises, ran under the street, and the gas company, in breaking up the soil of the road, damaged the arches, it was held that the arches were "buildings" within the meaning of the above section, and that the company could not justify breaking through them (*Thompson v. Sunderland Gas Co.* (1877), 2 Ex. D. 429).

**Appendix.****NOTE.**

Private land  
—*contd.*

A piece of ground adjoining a railway station and belonging to the railway Company was metalled and separated from the highway only by a gutter, and was used as an approach to the railway station. Private carriages were allowed to stand there, but no hackney or public carriages except those of the appellant, who by agreement with the company had the sole right of standing carriages there for the purpose of plying for hire. The appellant having been convicted in a penalty for allowing his carriages to ply there for hire without a licence, it was held that the place was not a "street" within the meaning of the Town Police Clauses Act, 1847 (10 & 11 Vict. c. 89), s. 8, for that the places included by that section in the word "street" were places over which the public had a right of passage; and that the conviction was therefore wrong (*Curtis v. Embury* (1872), L. R. 7 Exch. 869).

A gas company laid down pipes in the place of pipes which had previously been laid down by them through a piece of uninclosed land belonging to the plaintiff. This land was situated immediately above high water mark upon the shore at the mouth of the river Mersey and between New Brighton and Egremont. The pipes were laid in the sand, and it appeared that the inhabitants of New Brighton and Egremont had always been accustomed to pass and repass along the shore, and at high tide had been in the habit of going upon the plaintiff's land, but had not crossed in any defined track. In an action for an injunction to restrain the gas company from trespassing and for a mandatory injunction calling upon them to remove the pipes, it was held that the plaintiff having commenced her action immediately she became aware by the relaying of the pipes that the company had committed a trespass, was not estopped by ss. 6 and 7 of the Gasworks Clauses Act, 1847, and that her land was not a public place or highway so as to be included in the definition of the word "street" in s. 8 of that Act (*Maddock v. Wallasey Local Board* (1886), 50 J. P. 404; 55 L. J. Q. B. 267).

An estate having been laid out for building, a part was also laid out as private roads, and upon a petition the owners taking the private roads covenanted that the other freeholders and occupiers of the houses should have the full use and enjoyment of the roads in as absolute a manner as if they were public roads. A request to be supplied with gas by a minority of the occupiers of houses was held sufficient (without the consent of the freeholders) to justify a gas company whose special Act incorporated the Gasworks Clauses Act, 1847, to lay down pipes along the said roads (*Selby v. Crystal Palace District Gas Co.* (1862), 81 L. J. Ch. 595).

An owner of premises abutting on a highway enjoys as a private right the right of access from his own premises to the highway, and any interference with that access is an interference with a private right. But his right to transfer goods from vans in the public roadway across the public pavement to his premises is a right enjoyed by him as one of the public entitled to use the highway. It is an individual interest in a public right, but is not a private right which entitles him to restrain a local authority acting *bonâ fide* under statutory powers, from obstructing the highway adjoining his premises in a manner which affects his personal convenience. The obstruction alleged was the erection of standards or lamp posts in Villiers Street for the purpose of lighting the street by electricity (*W. H. Chaplin & Co., Limited v. Mayor of the City of Westminster*, [1901] 2 Ch. 829).

Notice to be  
served on  
persons

8. Before the Undertakers proceed to open or break up any street, bridge, sewer, drain, or tunnel, they shall give to the persons under

whose control or management the same may be, or to their clerk, surveyor, or other officer, notice in writing of their intention to open or break up the same, not less than three clear days before beginning such work, except in cases of emergency arising from defects in any of the pipes or other works, and then so soon as is possible after the beginning of the work, or the necessity for the same shall have arisen.

### Appendix.

—  
having control, etc., before breaking up streets or opening drains.

See further, s. 14 of the Schedule to the Electric Lighting (Clauses) Act, 1899, *ante*, p. 168.

9. No such street, bridge, sewer, drain, or tunnel shall, except in the cases of emergency aforesaid, be opened or broken up except under the superintendence of the persons having the control or management thereof, or of their officer, and according to such plan as shall be approved of by such persons or their officer, or in case of any difference respecting such plan, then according to such plan as shall be determined by two justices; and such justices may, on the application of the persons having the control or management of any such sewer, drain, or their officer, require the Undertakers to make such temporary or other works as they may think necessary for guarding against any interruption of the drainage during the execution of any works which interfere with any such sewer or drain: Provided always, that if the persons having such control or management as aforesaid, and their officer, fail to attend at the time fixed for the opening of any such street, bridge, sewer, drain, or tunnel, after having had such notice of the Undertakers' intention as aforesaid, or shall not propose any plan for breaking up or opening the same, or shall refuse or neglect to superintend the operation, the Undertakers may perform the work specified in such notice without the superintendence of such persons or their officer.

Streets or drains not to be broken up except under superintendence of persons having control of the same.

If persons having the control, etc., fail to superintend, Undertakers may perform the work without them.

See note to the preceding section.

The position, depth, and mode in which the underground work is intended to be done must form part of the plan, so as to enable the road authority to judge whether the proposed work ought to be done without modification (*Edgware Highway Board v. Colne Valley Water Co.* (1877), 46 L. J. Ch. 889; and *East Molesey Local Board v. Lambeth Waterworks Co.*, [1892] 3 Ch. 289).

Section 14 of the Schedule to the Electric Lighting (Clauses) Act, 1899, makes further provision as to notice and as to service of a "plan of the works showing the mode and position in which the works are intended to be executed, and the manner in which it is intended that the street or bridge, or any sewer, drain, or tunnel, therein or thereunder, is to be interfered with." By s. 1 of the Schedule to the same Act "plan" is defined to mean "a plan drawn to a horizontal scale of at least one inch to eighty-eight feet, and where possible a section drawn to the same horizontal scale as the plan and to a vertical scale of at least one inch to eleven feet, or to such other scale as the Board of Trade may approve of for both plan and section, together with such detail plan and sections as may be necessary."

E.L.

Q

**Appendix.****NOTE.**

Section 14 above referred to also provides for the approval of the plan by the local authority and the Postmaster-General. See p. 168.

An "approved" plan is a plan which has been lawfully approved and not one which has merely received approval in fact. Thus, where a local authority were empowered to make byelaws for the regulation of buildings within its jurisdiction and such byelaws were properly made and were in force, it was held that the local authority had no power to sanction plans in contravention of the byelaws (*Yabbicom v. King*, [1899] 1 Q. B. 444, following *McIntosh and Pontypridd Improvements Co., In re* (1892), 61 L. J. Q. B. 164. Cf. *Ayr Harbour Trustees v. Oswald* (1888), 8 App. Cas. 628). For an instance of express statutory power to dispense with a byelaw, see London Building Act, 1894 (57 & 58 Vict. ch. cccxiii.), s. 164 (2).

The Metropolitan Electric Supply Co., Limited, appeared in answer to eight summonses at the instance of the Marylebone Borough Council charging them with having committed breaches of their West London Order of 1889 by laying down in the district more mains than had been sanctioned and approved by the late Marylebone Vestry, now the Marylebone Borough Council, and by doing the work otherwise than in accordance with plan approved. The magistrate convicted and fines were imposed (*Marylebone Borough Council v. Metropolitan Electric Supply Co., Limited* (1901), 65 J. P. 172).

Streets, etc.,  
broken up to  
be reinstated  
without  
delay.

10. When the Undertakers open or break up the road or pavement of any street or bridge, or any sewer, drain, or tunnel, they shall with all convenient speed complete the work for which the same shall be broken up, and fill in the ground and reinstate and make good the road or pavement, or the sewer, drain, or tunnel so opened or broken up, and carry away the rubbish occasioned thereby, and shall at all times, whilst any such road or pavement shall be so opened or broken up, cause the same to be fenced and guarded, and shall cause a light sufficient for the warning of passengers to be set up and maintained against or near such road or pavement where the same shall be open or broken up every night during which the same shall be continued open or broken up and shall keep the road or pavement which has been so broken up in good repair for three months after replacing and making good the same, and for such further time, if any, not being more than twelve months in the whole, as the soil so broken up shall continue to subside.

See *Goodson v. Sunbury Gas Consumers Co.*, cited *infra*, p. 227.

Penalty for  
delay in  
reinstating  
streets, etc.

11. If the Undertakers open or break up any street or bridge, or any sewer, drain, or tunnel, without giving such notice as aforesaid, or in a manner different from that which shall have been approved of or determined as aforesaid, or without making such temporary or other works as aforesaid when so required, except in the cases in which the Undertakers are hereby authorised to perform such works without any superintendence or notice, or if the Undertakers make any delay in completing any such work, or in filling in the ground, or reinstating and making good the road or pavement, or the sewer, drain, or tunnel so



opened or broken up, or in carrying away the rubbish occasioned thereby, or if they neglect to cause the place where such road or pavement has been broken up to be fenced, guarded, and lighted, or neglect to keep the road or pavement in repair for the space of three months next after the same is made good, or such further time as aforesaid, they shall forfeit to the persons having the control or management of the street, bridge, sewer, drain, or tunnel, in respect of which such default is made, a sum not exceeding five pounds for every such offence, and they shall forfeit an additional sum of five pounds for each day during which any such delay as aforesaid shall continue after they shall have received notice thereof.

Appendix.

A gas company having dug a trench in a public road, filled up the same so carelessly and defectively that the wheel of a vehicle in which the plaintiff was riding sank suddenly into the trench and so caused personal injury to the plaintiff. The jury found that the company were guilty of negligence in the filling up of the road, and that they left the road in such a state as to constitute a nuisance and a danger to those using the road. The gas company contended that they were only liable for penalties under the above section in accordance with the principle that where Parliament imposes a duty and a penalty for the non-performance of it, a remedy by civil action for damages was not competent (*Atkinson v. Newcastle Waterworks Co.* (1877), 2 Ex. D. 441). Lord Russell, L.C.J., held that as the company had left the road in a condition which amounted to a public nuisance, they were liable in damages to the plaintiff notwithstanding their liability to penalties under s. 11 (*Goodson v. Sunbury Gas Consumers Co.* (1896), 75 L. T. 251; cf. *Milnes v. Huddersfield Corporation* (1886), 11 App. Cas. 511).

12. If any such delay or omission as aforesaid take place, the persons having the control or management of the street, bridge, sewer, drain, or tunnel, in respect of which such delay or omission shall take place, may cause the work so delayed or omitted to be executed, and the expense of executing the same shall be repaid to such persons by the Undertakers; and such expenses may be recovered in the same manner as damages are recoverable under this or the special Act.

In case of delay, other parties may reinstate and recover the expenses.

\* \* \* \* \*

See s. 14 of the Schedule to the Electric Lighting (Clauses) Act, 1899, *ante*, p. 168.

And with respect to waste or misuse of the gas, or injury to the pipes or other works, be it enacted as follows :—

18. Every person who shall lay or cause to be laid any pipe to communicate with any pipe belonging to the Undertakers without their consent, or shall fraudulently injure any such meter as aforesaid, or who, in case the gas supplied by the Undertakers is not ascertained by meter, shall use any burner [other than such as has been provided or approved of by the Undertakers, or] of larger dimensions than he has contracted to pay for or shall keep the lights burning for a longer time

Penalty for fraudulently using the gas of the Undertakers.

**Appendix.** — than he has contracted to pay for, or who shall otherwise improperly use or burn such gas, or shall supply any other person with any part of the gas supplied to him by the Undertakers, shall forfeit to the Undertakers the sum of five pounds for every such offence, and also the sum of forty shillings for every day such pipe shall so remain, or such works or burner shall be so used, or such excess be so committed or continued, or such supply furnished; and the Undertakers may take off the gas from the house and premises of the person so offending, notwithstanding any contract which may have been previously entered into.

So much of this section as relates to the use of any burner other than such as has been provided or approved by the Undertakers is not incorporated. Electric Lighting Act, 1882, s. 12 (2). See p. 106.

Where a gas consumer on his own premises substituted for part of a gas pipe belonging to the company a larger pipe for the purpose of increasing his supply, and did so without any fraud, waste, or misuse of the gas, but without the consent of the company, the court held on a case stated by magistrates, that he had been rightly convicted under the above section (*Wood v. West Ham Gas Co.* (1885), 52 L. T. 817).

Section 28 of the Electric Lighting Act, 1882, further provides that any person who maliciously or fraudulently abstracts, causes to be wasted, or diverted, consumes, or uses any electricity shall be guilty of simple larceny and punishable accordingly. See *ante*, p. 121.

See further, ss. 49—59 of the Schedule to the Electric Lighting (Clauses) Act, 1899, *ante*, pp. 196 *et seq.*

Penalty for wilfully damaging pipes.

**19.** Every person who shall wilfully remove, destroy, or damage any pipe, pillar, post, plug, lamp, or other work of the Undertakers for supplying gas, or who shall wilfully extinguish any of the public lamps or lights, or waste or improperly use any of the gas supplied by the Undertakers, shall for each such offence forfeit to the Undertakers any sum not exceeding five pounds, in addition to the amount of the damage done.

Satisfaction for accidentally damaging pipes.

**20.** Every person who shall carelessly or accidentally break, throw down, or damage any pipe, pillar, or lamp belonging to the Undertakers or under their control, shall pay such sum of money by way of satisfaction to the Undertakers for the damage done, not exceeding five pounds, as any two justices or the sheriff shall think reasonable.

The lamp of a gas company was injured by the negligent driving of the defendant's servant:—*Held*, that the common law right to recover damages by action was not ousted by the above section (*Crystal Palace Gas Co. v. Idris* (1900), 82 L. T. 200).

*Sections of the Gasworks Clauses Act, 1871 (34 & 35 Vict. c. 41), incorporated.*

Penalty for injuring meters.

**38.** Every person who wilfully, fraudulently, or by culpable negligence injures or suffers to be injured any pipes, meter, or fittings belonging to

the Undertakers, or alters the index to any meter, or prevents any meter from duly registering the quantity of gas supplied, or fraudulently abstracts, consumes, or uses gas of the Undertakers, shall (without prejudice to any other right or remedy for the protection of the Undertakers or the punishment of the offender) for every such offence forfeit and pay to the Undertakers a sum not exceeding five pounds, and the Undertakers may in addition thereto recover the amount of any damage by them sustained; and in any case in which any person has wilfully or fraudulently injured or suffered to be injured any pipes, meter, or fittings belonging to the Undertakers, or altered the index to any meter, or prevented any meter from duly registering the quantity of gas supplied, the Undertakers may also, until the matter complained of has been remedied, but no longer, discontinue the supply of gas to the person so offending (notwithstanding any contract previously existing); and the existence of artificial means for causing such alteration or prevention, or for abstracting, consuming, or using gas of Undertakers, when such meter is under the custody or control of the consumer, shall be *prima facie* evidence that such alteration, prevention, abstraction, or consumption, as the case may be, has been fraudulently, knowingly and wilfully caused by the consumer using such meter.

Appendix.

## RECOVERY OF GAS RENTS.

39. In case any consumer of gas supplied by the Undertakers leaves the premises where such gas has been supplied to him without paying the gas rent or meter rent due from him, the Undertakers shall not be entitled to require from the next tenant of such premises the payment of the arrears left unpaid by the former tenant, unless such incoming tenant has undertaken with the former tenant to pay or exonerate him from the payment of such arrears.

Incoming  
tenants not  
liable to pay  
arrears of  
gas rents, etc.

See the notes to s. 21 of the Act of 1882, *ante*, p. 120.

Under s. 22 of the schedule to the Electric Lighting (Clauses) Act, 1899, *ante*, p. 182, the Undertakers are entitled to require security to be given to them. (See also s. 71, p. 206.)

40. If any person supplied with gas or with any gas meter or fittings by the Undertakers, neglects to pay to the Undertakers the rent due for such gas, or the rent or money due to the Undertakers for the hire or fixing of such meter, or any expenses lawfully incurred by the Undertakers in cutting off the gas from the premises of such person, the Undertakers may recover the sum so due in like manner as a penalty under this Act.

Recovery of  
rents, etc.

See cases collected under ss. 20 and 21 of the Act of 1882, *ante*, pp. 117—121.

As regards the concluding words, "may recover the sum so due in like manner as a penalty under this Act," see the concluding portion of s. 12 of the Electric Lighting Act, 1882, which provides "that sums recoverable

**Appendix.****NOTE.**

under the provisions of section 40 of the Gasworks Clauses Act, 1871, shall not be recovered as penalties, but may be recovered summarily as civil debts." See p. 107. As to the recovery of civil debts in a court of summary jurisdiction, see ss. 6 and 85 of the Summary Jurisdiction Act, 1879 (42 & 48 Vict. c. 49). See also s. 41, *infra*. As to Scotland and Ireland, see ss. 86 and 87 of the Act of 1882, *ante*, p. 185, and ss. 83 and 84 of the Schedule to the Act of 1899, *ante*, p. 210.

See further, s. 21 of the Electric Lighting Act, 1882, providing for "Recovery of Charges, etc.," which gives power to Undertakers to cut off the supply of electricity in the event of non-payment, *ante*, p. 120.

See also notes to s. 12, *ante*, p. 108.

Recovery of  
sums due to  
Undertakers.

**41.** Whenever any person neglects to pay any rent or sum due and payable by him to the Undertakers, the Undertakers may recover the same, with full costs of suit, in any court of competent jurisdiction, and the remedy of the Undertakers under this enactment shall be in addition to their other remedies for the recovery of such rent or sum.

See preceding section and note.

**LEGAL PROCEEDINGS.**

Contents of  
summons or  
warrant.

**42.** Any summons or warrant issued for any of the purposes of this Act may contain, in the body thereof, or in a schedule thereto, several names and several sums.

\* \* \* \* \*

Service of  
notice by  
Undertakers.

**45.** Every notice which the Undertakers are by this Act required to serve upon any person shall be served by being delivered to the person for whom it is intended, or by being left at his usual or last-known place of abode, or sent by post addressed to such persons, or if such person or his address be not known to the Undertakers, and cannot after due inquiry be found or ascertained, then by being affixed for three days to some conspicuous part of the premises to which such notice relates.

Further, as to notices, see s. 61 of the Schedule to the Electric Lighting (Clauses) Act, 1899, *ante*, p. 200.

Liability to  
gas rent not  
to disqualify  
justices from  
acting.

**46.** No justice or judge of any county Court or quarter sessions shall be disqualified from acting in the execution of this Act by reason of his being liable to the payment of any gas rent or other charge under this Act.

# FORM OF PROVISIONAL ORDER

UNDER THE

ELECTRIC LIGHTING ACTS, 1882 AND 1888.

---

## PROVISIONAL ORDER.

(SESSION .)

GRANTED BY THE BOARD OF TRADE UNDER THE ELECTRIC  
LIGHTING ACTS, 1882 AND 1888,\* TO (*name of Undertakers*)  
IN RESPECT OF (*name of borough or district in which the area  
of supply is situated*).

---

1. This Order may be cited as the                      Electric Lighting    Short title.  
Order, 19 .

2. The provisions contained in the Schedule to the Electric    Incorporation  
Lighting (Clauses) Act, 1899 (with the exception of sections 83    of the  
and 84 of that Schedule†), are incorporated with and form part of    Electric  
this Order.                      Lighting  
   (Clauses)  
   Act, 1899.

3. The Undertakers for the purposes of this Order and within    Undertakers.  
the meaning of section 2 of the Schedule to the Electric Lighting  
(Clauses) Act, 1899, are the‡ .

4. The area of supply for the purposes of this Order and within    Area of  
the meaning of section 4 of the Schedule to the Electric Lighting    supply.  
(Clauses) Act, 1899, shall be the area which is described in the

---

\* In Scotch Orders add "and the Electric Lighting (Scotland) Act, 1890" (a).

† In Scotch Orders s. 84 only, in Irish Orders s. 83 only must be excepted.

‡ A company registered under the Companies Acts should be so described, and  
the address of the registered office should be added.

---

(a) The above form will no doubt be now added to so as to include the *Electric  
Lighting (Scotland) Act, 1902, which passed 18th December, 1902.*

**Clause 4.** First Schedule to this Order, and is more particularly delineated on the map deposited together with this Order at the Board of Trade by the Undertakers, and signed by an assistant secretary to the Board of Trade.

Power to  
break up  
streets, etc.

§5. Subject to the provisions incorporated with this Order, the Undertakers are specially authorised by this Order to break up the streets not repairable by the local authority which are mentioned in the Second Schedule to this Order, and the railways and tramways which are also mentioned in that Schedule.

Compulsory  
works.

6. The streets and parts of streets throughout which the Undertakers are to lay down suitable and sufficient distributing mains for the purposes of general supply within a period of two years after the commencement of this Order, as mentioned in section 21 of the Schedule to the Electric Lighting (Clauses) Act, 1899, are those mentioned in the Third Schedule to this Order.

Maximum  
prices.

7. The maximum prices which may be charged by the Undertakers as mentioned in section 32 of the Schedule to the Electric Lighting (Clauses) Act, 1899, are those stated in the Fourth Schedule to this Order.

Deposit.

||8. The sum to be deposited or secured in pursuance of section 5 of the Schedule to the Electric Lighting (Clauses) Act, 1899, is            pounds.

Commence-  
ment of  
Order.

9. This Order shall come into force upon the day when the Act confirming this Order is passed, and that day, for the purposes of the Electric Lighting (Clauses) Act, 1899, shall be the commencement of this Order.

[N.B.—Where an Order is granted to a company or person having overhead wires already installed, a clause will be inserted providing for their removal except in special circumstances.]

---

§ See s. 12 of the Schedule to the Electric Lighting (Clauses) Act, 1899.

|| This provision is not required in the case of an order granted to a local authority.

---

Schedule.

## SCHEDULES.

---

FIRST SCHEDULE.

\*Area of supply—

---

SECOND SCHEDULE.

List of streets not repairable by the local authority, railways, and tramways which may be broken up by the Undertakers in pursuance of the special powers granted by this Order.

(a.) Streets :

(b.) †Railways :

(c.) Tramways :

---

THIRD SCHEDULE.

List of streets and parts of streets throughout which the Undertakers are to lay down suitable and sufficient distributing mains for the purposes of general supply, within a period of two years after the commencement of this Order—

---

\* Where the area of supply consists wholly of recognised areas of government, such as boroughs, districts, or parishes, it will be described accordingly. In other cases detailed boundaries must be inserted, and a provision added, that in case of difference between the description in the schedule and the area as delineated on the deposited map, the latter is to prevail.

† In ordinary cases the level crossings must be specified : In the case of a light railway or other railway running along the highway on the level, the length and position of the railway must be described.

**Schedule.**  

---

**FOURTH SCHEDULE.***Maximum Prices.*

In this schedule—

The expression “unit” shall mean the energy contained in a current of one thousand ampères flowing under an electro-motive force of one volt during one hour.

**SECTION 1.**

Where the Undertakers charge any consumer by the actual amount of energy supplied to him, they shall be entitled to charge him at the following rates per quarter :—For any amount up to twenty units, thirteen shillings and fourpence ; and for each unit over twenty units, eightpence.

**SECTION 2.**

Where the Undertakers charge any consumer by the electrical quantity contained in the supply given to him, they shall be entitled to charge him according to the rates set forth in section 1 of this schedule, the amount of energy supplied to him being taken to be the product of that electrical quantity and the declared pressure at the consumer's terminals, that is to say, such a constant pressure at those terminals as may be declared by the Undertakers under the Board of Trade regulations.

---



## RULES

MADE BY THE BOARD OF TRADE WITH RESPECT TO  
APPLICATIONS FOR LICENSES AND PROVISIONAL  
ORDERS, ETC., UNDER THE ELECTRIC LIGHTING  
ACTS, 1882 to 1890.

---

### *Consent of Local Authorities.*

Rule I.—No application for a license or for the renewal of a license will be entertained unless proof of the consent to such application of every local authority having jurisdiction within the proposed area of supply is given to the Board of Trade.

Rule II.—No application for a provisional order (other than an application from the local authority of the district) will be entertained by the Board of Trade unless proof of the consent of every local authority having jurisdiction within the proposed area of supply to the grant of the order, or a request from the applicants asking the Board of Trade to dispense with the consent of such local authorities as have not consented and giving the reasons for such request, is deposited with the Board of Trade within the time limited for proving compliance with the provisions of the Electric Lighting Acts and these rules.\*

Rule III.—At the time of proving the consent of the local authority to an application for a license or renewal of a license or to the grant of a provisional order, the applicants must deposit with the Board of Trade copies of any agreement entered into with the local authority relating to such consent.

Rule IV.—Where the consent of any local authority is required to any application for a license or the renewal of a license or to the grant of a provisional order, such consent must be given by a resolution passed at a meeting of the local authority held after

---

\* For instances where the Board of Trade have dispensed with the consent of the local authority, see *ante*, pp. 76—9.

- Rule 4.** — previous notice of the same and of the purpose thereof has been given in the manner in which notices of meetings of such local authority are usually given; and the fact that such a resolution was duly passed must be proved by a certificate signed by the secretary or clerk to such local authority reciting copies of the notice and of the resolution, and declaring that the notice was duly given and the resolution duly passed.

#### *Notices.*

**Rule V.**—Any local authority, company, or person intending to apply for a license or provisional order must at the time of lodging their memorial with the Board of Trade in the case of a license, and on or before the 1st November in the case of a provisional order, give notice in writing of their intended application to every local authority, company, or person authorised to supply electricity under statutory powers within the district to which the proposed application refers.

**Rule VI.**—Except in the case of an application by the local authority for the district, a provisional order will not be granted by the Board of Trade except to the body or person by whom the notice required by section 4, sub-section (1), of the Electric Lighting Act, 1882, was given.

**Rule VII.**—In any case where a local authority, company, or person is required by the Acts to give notice to the local authority of the district, “in such manner as the Board of Trade may direct or approve,” such notice must be given in writing, and must be served, either by leaving the same at the offices of the said local authority on or before the appointed day or by forwarding the same by post in a registered letter so that the same would in ordinary course of post be delivered on or before the appointed day.

#### *Application and Deposits.*

**Rule VIII.**—Every application for a license or provisional order must be made by memorial signed or sealed by, or on behalf of, the applicants, headed with a short title descriptive of the proposed undertaking (corresponding with that at the head of the advertisement hereinafter mentioned, *see* Rule XIII.), addressed to the Board of Trade. With the memorial must be deposited six copies of the draft license or order, as applied for, with the schedule or schedules (if any) referred to therein.

Rule IX.—The deposited copies of the draft license or order must be in print. They must be printed on one side only and each schedule annexed must begin a new page.

Rule 9.  
—

The names and addresses of the parliamentary agents or solicitors for the license or order must be printed on the outside of the draft.

There must be a notice at the end of the draft stating that objections are to be made by letter addressed to the Board of Trade, marked on the outside of the cover enclosing it "Electric Lighting Acts," and that such letter is to be sent to the Board of Trade in the case of a provisional order on or before the 15th January next ensuing, and in the case of a license within two months from the date of the newspaper containing the first advertisement of the application, and that a copy of such objections is to be forwarded to the parliamentary agents or solicitors for the license or order.

The draft must contain amongst other things—

1. The address and description of the applicants.
2. A description of the proposed area of supply.
- \*3. A statement of the purposes for which a supply is to be given, viz., any or all of the public or private purposes specified in section three of the Electric Lighting Act, 1882.
- \*4. Provisions concerning the breaking up of streets, railways, and tramways, where powers are sought to be obtained by the license or order for those purposes.
- \*5. Conditions of supply.
- \*6. Provisions for securing the safety of the consumer and of the public from injury by shock, fire, or otherwise.
- \*7. Provisions for enforcing the performance by the undertakers of their duties in relation to the supply of electricity and for the revocation of the license or order where the undertakers fail to perform such duties.

The applicants must also deposit a sufficient number of printed copies of the draft license or order at offices in London and within the proposed area of supply to be specified in the advertisement hereinafter mentioned (*see* Rule XIII.), such copies to be there furnished to all persons applying for them, at a price of not more than one shilling each.

---

\* These particulars must not be set out at length in draft orders, but must be provided for by the incorporation of the Electric Lighting (Clauses) Act, 1899.

**Rule 10.** Rule X.—The applicants must also deposit at the Board of Trade a published map of the district on a scale of not less than six inches to a mile, or if there is no published map, then the best map procurable, showing the boundaries of the proposed area of supply, and the streets in which it is proposed that electric lines should be laid down within a specified time—

They must also deposit a copy of the said map for public inspection—

In England or Ireland, in the office of the clerk of the peace for every county, riding, or division, and of the local authority of every district

In Scotland, in the office of the principal sheriff clerk for every county, district, or division, and of the local authority of every district

in which the proposed area of supply or any part thereof is situate.

Such deposits must be made in the case of a license when the memorial is lodged, and in the case of a provisional order on or before the 30th November.

**Rule XI.**—There must also be deposited with the memorial,—

1. A list of the local authorities in whose districts the area of supply is situate.
2. A list of the local authorities, companies, or persons (if any) authorised to supply electricity under statutory powers within the area of supply.
3. A list of the streets not repairable by a local authority and of the railways and tramways (if any) which the applicants propose to take powers to break up.
4. A list of the canals and navigable rivers (if any) within the proposed area of supply.
5. A statement of the capital proposed to be expended and employed in connexion with the undertaking, and the mode in which such capital is to be provided, or in the case of an application by a local authority a statement of the sums proposed to be expended.
6. If the applicants are a company incorporated under the provisions of the Companies Acts, a copy of the memorandum and articles of association.
7. A fee of 50*l.* by cheque payable to an "Assistant Secretary of the Board of Trade" to cover ordinary expenses. If in consequence of inquiries or otherwise additional expense is incurred, the amount will

be charged to the applicants and must be paid by them in addition to the ordinary fee. **Rule 11.**  
—

*Application under Section 13 of Electric Lighting Act, 1882.*

**Rule XII.**—Where the undertakers under any license, order, or Special Act desire the written consent of the Board of Trade under section 13 of the Electric Lighting Act, 1882, to enable them to break up any street not repairable by a local authority or any railway or tramway which they are not empowered to break up under such license, order, or Special Act, application for such consent must be made by memorial, and the memorial must specially request such consent and must describe accurately the street, railway, or tramway which they propose to acquire power to break up.

*Procedure.*

**Rule XIII.**—Applicants for a license or provisional order must proceed as follows, subject in the case of a license to the application having been previously entertained by the Board of Trade, *vide* Rule I. :—

They must publish notice by advertisement of their application, or in the case of a provisional order, of their intended application, and every such advertisement must contain the following particulars :—

1. The objects of the application.
2. The address and description of the applicants.
3. A description of the proposed area of supply.
4. The names of the streets in which it is proposed that electric lines should be laid down within a specified time.
5. A list of the streets not repairable by a local authority and of the railways and tramways (if any) which the applicants propose to take powers by the license or order to break up.
6. The address of an office in London, and another office within the proposed area of supply, at which printed copies of the draft license or order when applied for, and of the license or order when made, can be obtained at a price of not more than one shilling each.

The advertisement must be headed with a short title, descriptive of the undertaking (corresponding with that at the head of the memorial), and it must state that every local or other public

**Rule 13.**  
—

authority, company, or person desirous of bringing before the Board of Trade any objection respecting the application must do so by letter addressed to the Board of Trade, marked on the outside of the cover enclosing it "Electric Lighting Acts," in the case of a provisional order on or before the 15th January next ensuing, and in the case of a license within two months from the date of the newspaper containing the first advertisement, and that a copy of such objection must also be forwarded to the parliamentary agents or solicitors for the license or order.

The advertisement must be inserted once at least in each of two successive weeks in one and the same newspaper, published and circulating in the proposed area of supply, or in such other newspaper as the Board of Trade may direct; and once at least in the London, Edinburgh, or Dublin Gazette, accordingly as the proposed area of supply is situate in England, Scotland, or Ireland.

**Rule XIV.**—If any local or other public authority, company, or person desires to bring before the Board of Trade any objection respecting an application for a license or a provisional order they must do so by letter addressed to the Board of Trade, marked on the outside of the cover enclosing it "Electric Lighting Acts," in the case of a provisional order on or before the 15th January next ensuing, and in the case of a license within two months from the date of the newspaper containing the first advertisement of the application. A copy of the objection must also be served upon the parliamentary agents or solicitors for the license or order. If any local or other public authority, company, or person desires to have any clauses or other amendments inserted in the license or order, they must deliver the same to the Board of Trade, and also to the parliamentary agents or solicitors for the license or order, on or before the time limited for bringing objections.

**Rule XV.**—When a license or provisional order has been granted by the Board of Trade and delivered to the applicants, they must forthwith deposit printed copies for public inspection in the offices specified in Rule X., and must supply copies to all persons applying for the same, at a price of not more than one shilling each, and must further publish the same as the Board of Trade may direct.

**Rule XVI.**—Where in a license or provisional order granted by the Board of Trade a deposited map is referred to, the promoters must within one month from the grant of the license or order

deposit at the Board of Trade a published map on a scale of not less than six inches to a mile, or if there is no published map then the best map procurable showing the area of supply coloured to correspond with the description in the license or order. The map must be mounted on linen and must be certified as correct as regards their respective districts by the clerk or surveyor to every local authority having jurisdiction within the area of supply.

**Rule 16.**  
—

*Special Provisions as to Provisional Orders.*

Rule XVII.—In the case of provisional orders the following additional regulations must be observed :

1. The advertisements must be inserted in October or November.
2. A copy of the advertisement must be deposited on or before the 30th November at the Board of Trade and at the offices specified in Rule X.
3. The memorial must be lodged on or before 21st December.
4. The parliamentary agents or solicitors for the order must be prepared to prove compliance with the provisions of the Acts and these rules by the 15th January, and all such proofs must be completed on or before the 22nd February. Six days' notice will be given of the day and hour at which such agents or solicitors are to attend for the purpose at the Board of Trade, and printed forms of proof will accompany the notice. These forms must be filled up and brought with the requisite documents to the Board of Trade at the time fixed for receiving proof.

The Board of Trade,  
September, 1899.

COURTENAY BOYLE,  
Secretary.

---

NOTE.—When applications for provisional orders authorising the supply of electricity within the district of any local authority are received by the Board of Trade from such local authority, and also from any other authority, company, or person, the Board of Trade will give a preference to the application of the local authority of the district in every case where, in the opinion of the Board of Trade, no special circumstances exist which render such a preference inexpedient.

In cases of applications for a license, renewal of license, or  
E.L. R

provisional order, to which objection is made by any person locally interested, the Board of Trade will, if they consider it expedient, hold a local enquiry, of which due notice will be given.

These Rules are in addition to any requirements relating to applications for provisional orders which are contained in the Standing Orders of Parliament.

---



## BOARD OF TRADE REGULATIONS (a).

- (A), FOR SECURING THE SAFETY OF THE PUBLIC,  
AND (B), FOR ENSURING A PROPER AND SUFFICIENT SUPPLY OF ELECTRICAL ENERGY MADE UNDER THE ELECTRIC LIGHTING ACTS, 1882 AND 1888.

---

### *Definitions.*

In the following regulations—

The expression “the Order” means the

The expression the “Undertakers” means the Undertakers for the purposes of the order.

The expression “consumer’s wires” means any electric lines on a consumer’s premises which are connected with the service lines of the undertakers at the consumer’s terminals.

The expression “aerial line” means any electric line which is placed above ground and in the open air.

The expression “pressure” means the difference of electrical potential between any two conductors through which a supply of energy is given, or between any part of either conductor and the earth: and—

- (a.) Where the conditions of the supply are such that the pressure may at any time exceed 500 volts if continuous, or 250 volts if alternating, but cannot exceed 3,000

---

(a) The regulations now in use were framed by the Board of Trade after a conference held on November 19th and 20th, 1895, with representatives of local authorities and companies supplying electricity and others interested. As to this, see more fully *ante*, p. 14. The Board of Trade, in fact, keep seven different sets of model regulations. These respectively apply to (1) Local Authorities—Provinces; (2) Companies—Provinces; (3) Companies—London; (4) Local Authorities—London; (5) Local Authorities—both London and Provinces in the case of orders granted in 1883; (6) Local Authorities—Provinces—Licence; (7) Companies—Provinces—Licence. These are all substantially the same. The form No. 2 alone is here set out, and any differences are noted.

**Regulations.**  
—

volts, whether continuous or alternating, the supply shall be deemed a high pressure supply.

- (b.) Where the conditions of the supply are such that the pressure may on either system exceed 3,000 volts, the supply shall be deemed an extra high pressure supply.

The expressions "high pressure" and "extra high pressure" respectively are used in relation to electric lines, conductors, circuits, and apparatus, according to the conditions of the supply delivered through the same or particular portions thereof.

Where these regulations require any metallic body to be "efficiently connected with earth," it shall be connected with the general mass of earth in such manner as will ensure at all times an immediate and safe discharge of electrical energy.

Other expressions to which meanings are assigned in the order or in the above-mentioned Acts have the same respective meanings in these regulations.

**A.—REGULATIONS FOR SECURING THE SAFETY OF THE PUBLIC.***General.*

Pressure of supply to consumers.

- (1.) The pressure of a supply delivered to any consumer shall not exceed 250 volts at any pair of terminals, except with the express approval of the Board of Trade. Such approval will only be given for special purposes and on the joint application of the consumer and the undertakers, and the supply will be subject to such further regulations as the Board of Trade may from time to time prescribe.

Pressure of supply to transforming apparatus.

- (2.) The pressure of a supply delivered to a transforming station or to transforming apparatus on a consumer's premises may exceed 250 volts, but shall not exceed the limits of high pressure.

Limitations of extra high pressure supply.

- (3.) An extra high pressure supply shall not be given except to distributing stations or other premises in the sole occupation of the undertakers, and with the written consent of the Board of Trade, and subject to such regulations and conditions as the Board may prescribe (b).

---

(b) The Board of Trade have in many cases made regulations authorising the use of extra high pressure under special conditions, especially in connection with regard

(4.) The maximum working current in any conductor shall not be sufficient to raise the temperature of the conductor or any part thereof to such an extent as to materially alter the physical condition or specific resistance of the insulating covering, if any, or in any case to raise such temperature to a greater extent than 80° Fahr. The cross sectional area and conductivity at joints must be sufficient to avoid local heating, and the joints must be protected against corrosion.

**Regulations.**

Maximum current in conductors.

(5.) The sectional area of the conductor in any electric line laid or erected in any street after the date of these regulations shall not be less than the area of a circle of one-tenth of an inch diameter, and, where the conductor is formed of a strand of wires, each separate wire shall be at least as large as No. 20 standard wire gauge.

Minimum size of conductors.

(6.) All material used for insulating electric lines or apparatus shall be of the best quality, and thoroughly durable and efficient, having regard to the conditions of its use. Suitable provision shall be made for the protection of the insulating material against injury or removal.

Specification of insulating material.

If the protection so provided be wholly or partly metallic it shall be efficiently connected with earth.

(7.) Every main shall be tested for insulation after having been placed in position and before it is used for the purposes of supply, the testing pressure being at least 200 volts, and the undertakers shall duly record the results of the tests of each main, or section of a main.

Insulation test of electric lines.

(8.) The insulation of every complete circuit used for the supply of energy, including all machinery, apparatus, and devices, forming part of, or in connexion with, such circuit, shall be so maintained that the leakage current shall not under any conditions exceed one-thousandth part of the maximum supply current; and suitable means shall be provided for the immediate indication and localisation of leakage. Every leakage shall be remedied without delay.

Maintenance of insulation.

Every such circuit shall be tested for insulation at least once in every week, and the undertakers shall duly record the results of the testings.

Provided that where the Board of Trade have approved of any part of any electric circuit being connected with earth, the

---

to system of supply, limit of voltage, carrying capacity of trunk mains, connection with earth, etc.

**Regulations.**

provisions of this regulation shall not apply to that circuit so long as the connexion with earth exists.

High pressure conductors to be covered.

(9.) Every high pressure conductor laid after the date of these regulations shall be continuously covered with insulating material to a thickness of not less than one-tenth part of an inch, and in cases where the extreme difference of potential in the circuit exceeds 2,000 volts, the thickness of insulating material shall not be less in inches or parts of an inch than the number obtained by dividing the number expressing the volts by 20,000.

Testing of insulation of all parts of any high pressure circuit.

(10.) A high pressure circuit shall not be brought into use unless the insulation of every part thereof has withstood the continuous application, during one hour, of pressure exceeding the maximum pressure to which it is intended to be subjected in use, that is to say,—in the case of every electric line a pressure twice the said maximum pressure, and in the case of every machine, device, or apparatus, a pressure 50 per cent. greater than the said maximum pressure.

The undertakers shall duly record the results of each test.

Quick-acting cut-off for high pressure lines, etc.

(11.) Every high pressure electric line, conductor, or other apparatus shall be protected by a suitable automatic quick-acting cut-off.

Provided that it shall not be incumbent upon the undertakers to provide such a cut-off for the outer conductor of a concentric main which is, with the approval of the Board of Trade, efficiently connected with earth.

Transformers.

(12.) In every case where a high pressure supply is transformed for the purpose of supply to one or more consumers, some suitable automatic and quick-acting means shall be provided to protect the consumer's wires from any accidental contact with or leakage from the high pressure system, either within or without the transforming apparatus.

Limit of power in high pressure electric line.

(13.) A high pressure electric line shall not be used for the transmission of more than 300,000 Watts, or in the case of an aerial line, 50,000 Watts, except with the consent in writing of the Board of Trade, and efficient means shall be provided to prevent this limit being at any time exceeded.

Protection from lightning.

(14.) Where any portion of any electric line or any support for an electric line is exposed in such a position as to be liable to injury from lightning, it shall be efficiently protected against such injury.

(15.) Where any accident by explosion or fire, or any other accident of such kind as to have caused or to be likely to have caused loss of life or personal injury has occurred at any part of any electric line or work, the undertakers shall give immediate notice thereof to the Board of Trade.

**Regulations.**

Accidents to be reported.

See s. 88 of Schedule to the Electric Lighting (Clauses) Act, 1899, and notes thereto, p. 192.

### *Aerial Lines.*

(16.) Every aerial line shall be attached to supports at intervals not exceeding 200 feet where the direction of the line is straight, or 150 feet where the direction is curved or where the line makes a horizontal angle at the point of support.

Maximum intervals between supports.

(17.) Every support for an aerial line shall be of a durable material, and properly stayed against forces due to wind pressure, change of direction of the line, or unequal lengths of span. The factor of safety shall be for aerial lines and suspending wires at least 6, and for all other parts of the structure at least 12, taking the maximum possible wind pressure at 50 pounds per square foot. No addition need be made for a possible accumulation of snow.

Supports, construction and erection of.

Every support, if of metal, shall be efficiently connected with earth.

(18.) All aerial lines shall be attached to insulators, and shall be so guarded that they cannot fall away from the support. Conductors covered with insulating material shall not be attached to the insulators by uninsulated metal binders.

Attachment of aerial lines.

(19.) An aerial line shall not in any part thereof be at a less height from the ground than 18 feet (c), or where it crosses a street 30 feet (c), or within 5 feet measured horizontally or 7 feet measured vertically from any building or erection other than a support for the line, except where brought into a building for the purpose of supply.

Height from ground and distance from buildings, etc.

(20.) Service lines from aerial lines shall be led as directly as possible to insulators firmly attached to some portion of the consumer's premises which is not accessible to any person without the use of a ladder or other special appliance, and from this point of attachment they shall be enclosed and protected in accordance

Service lines from aerial lines.

(c) In County of London Orders 20 feet and 35 feet respectively, so as to admit of the use of larger fire escapes.

**Regulations.**

with the subsequent regulations as to electric lines on the consumer's premises. Every portion of any service line which is outside a building but is within 7 feet from the building shall be completely enclosed in stout india-rubber tubing.

Angle of crossing thoroughfares.

(21.) Where an aerial line crosses a street, the angle between the line and the direction of the street at the place of crossing shall not be less than 60 degrees, and the spans shall be as short as possible.

Lines crossing metallic substance.

(22.) Where an aerial line crosses, or is in proximity to, any metallic substance, precautions shall be taken by the undertakers against the possibility of the line coming into contact with the metallic substance, or of the metallic substance coming into contact with the line by breakage or otherwise.

Suspending wires.

(23.) Every high pressure aerial line shall be efficiently suspended by means of insulating ligaments to suspending wires, so that the weight of the line does not produce any sensible stress in the direction of its length. All suspending wires, if of iron or steel, shall be galvanised.

Discharge of pressure in case of fire.

(24.) In the case of any high pressure aerial line exceeding one half mile in total length, means shall be provided whereby the pressure may be discharged from any portion of the line erected over or alongside of any building or buildings without loss of time in case of fire or other emergency.

Maintenance.

(25.) Every aerial line, including its supports and all the structural parts and electrical appliances and devices belonging to or connected with the line, shall be duly and efficiently supervised and maintained as regards both electrical and mechanical conditions.

Disused aerial lines to be removed.

(26.) An aerial line shall not be permitted to remain erected after it has ceased to be used for the supply of energy, unless the undertakers intend within a reasonable time again to take it into use.

*Electric Lines other than Aerial Lines.*

Construction of receptacles for electric lines.

(27.) All conduits, pipes, casings, and street boxes used as receptacles for electric lines shall be constructed of durable material, and where laid under carriage ways shall be of ample strength to prevent damage from heavy traffic; and reasonable

means shall be taken by the undertakers to prevent accumulation of gas in such receptacles.

**Regulations.**

(28.) Where any electric line crosses, or is in proximity to, any metallic substance, special precautions shall be taken by the undertakers against the possibility of any electrical discharge to the metallic substance from the line or from any metal conduit pipe or casing enclosing the line.

Crossing pipes, etc.

(29.) All metal conduits, pipes, or casings containing any electric line shall be efficiently connected with earth; and shall be so jointed and connected across all street boxes and other openings as to make good electrical connexion throughout their whole length.

Electric continuity of metal conduits, pipes and casings.

(30.) Where isolated lengths of metal conduit, pipe, or casing are used for the protection of any electric line at road crossings or similar positions, special precautions shall be taken to prevent the possibility of any electrical charging thereof.

Precautions against charging of short lengths of pipe, etc.

(31.) Where the conductors of electric lines placed in any conduit are not continuously covered with insulating material, they shall be secured in position, and no unfixed uninsulated material of a conducting nature shall be contained in the conduit. No such conductor shall be at a higher potential than 300 volts.

Precautions to be taken when bare conductors are used.

Adequate precautions shall also be taken to ensure that no accumulation of water shall take place in any part of the conduit, and to prevent any dangerous access of moisture to the conductors or the insulators.

In the case of any such electric lines laid in conduits after the date of these regulations, the insulators shall be so disposed that they can be readily inspected.

(32.) Every portion of any high pressure electric line placed above the surface of the ground, or in any subway not in the sole occupation of the undertakers, shall be completely enclosed either in a tube of highly insulating material embedded in brickwork, masonry, or cement concrete, or in strong metal casing efficiently connected with earth.

High pressure lines laid above ground.

(33.) Where any high pressure electric line is laid beneath the surface of the ground, efficient means shall be taken to render it impossible that the surface of the ground or any neighbouring electric line or conductor shall become charged by leakage from the high pressure electric line.

High pressure lines laid in proximity to other electric lines or to the surface of the ground.

**Regulations.**

Street boxes.

*Street Boxes (d).*

(34.) In addition to the provisions contained in Regulation 27 as to the construction of receptacles for electric lines, the following regulations shall be observed with respect to the construction of street boxes :—

- (a.) The covers of all street boxes shall be so secured that they cannot be opened except by means of a special appliance.
- (b.) The covers of all street boxes containing high pressure apparatus other than cables shall be connected to strips of metal laid immediately underneath the adjacent roadway, and efficient means shall be taken to render it impossible that the covers or other exposed parts of these boxes, or any adjacent material forming the surface of the street, shall become electrically charged, whether by reason of leakage, defect, or otherwise.
- (c.) Where street boxes are used as transformer chambers, reasonable means shall be taken to prevent as far as possible any influx of water, either from the adjacent soil or by means of pipes; and in the case of any such street box exceeding one cubic yard in capacity, ample provision shall be made, by ventilation or otherwise, for the immediate escape of any gas which may by accident have obtained access to the box, and for the prevention of danger from sparking.
- (d.) All street boxes shall be regularly inspected for the presence of gas, and if any influx or accumulation is discovered the undertakers shall give immediate notice to the authority or company whose gas mains are laid in the neighbourhood of the street box.

*Transforming Stations (e).*

Transforming stations.

(35.) Transforming stations or points in a system of distribution in which a high pressure supply is transformed for the purpose of supply to consumers, and which are not on the consumer's premises, shall be established in suitable places which are in the sole occupation and charge of the undertakers.

---

(d) See s. 13 of the Schedule to the Electric Lighting (Clauses) Act, 1899, *ante*, p. 165.

(e) See notes to s. 13 of the Schedule to the Electric Lighting (Clauses) Act, 1899, *ante*, p. 166.



*Consumer's Premises.***Regulations.**

(36.) The undertakers shall be responsible for all electric lines, fittings, and apparatus belonging to them, or under their control, which may be upon a consumer's premises, being maintained in a safe condition and in all respects fit for supplying energy.

Responsibility of undertakers for their lines, etc., on consumer's premises.

(37.) In delivering the energy to a consumer's terminals the undertakers shall exercise all due precautions so as to avoid risk of causing fire on the premises.

Fire risks.

(38.) A suitable safety fuse or other automatic disconnector shall be inserted in each service line within a consumer's premises as close as possible to the point of entry, and contained within a suitable locked or sealed receptacle of fireproof construction, except in cases where the service line is protected by fuses in a street box.

Main fuses or disconnectors.

(39.) All electric lines and apparatus placed on a consumer's premises shall be highly insulated and thoroughly protected against injury to the insulation or access of moisture, and any metal forming part of the electric circuit shall not unless efficiently connected with earth be exposed so that it can be touched. All electric lines shall be so fixed and protected as to prevent the possibility of electrical discharge to any adjacent metallic substance.

Treatment of electric lines and apparatus on consumer's premises.

(40.) Where the general supply of energy is a high pressure supply, and transforming apparatus is installed on a consumer's premises, the whole of the high pressure service, lines, conductors, and apparatus, including the transforming apparatus itself, so far as they are on the consumer's premises, shall be completely enclosed in solid walls, or in strong metal casing efficiently connected with earth and securely fastened throughout.

Transformers and high pressure apparatus to be enclosed in metal, etc.

(41.) The undertakers shall not connect the wires and fittings on a consumer's premises with their mains unless they are reasonably satisfied that the connexion would not cause a leakage from those wires and fittings exceeding one ten thousandth part of the maximum supply current to the premises; and where the undertakers decline to make such connexion they shall serve upon the consumer a notice stating their reasons for so declining.

Connexion to consumer's premises not to be made where leakage would result.

(42.) If the undertakers are reasonably satisfied, after making all proper examination by testing or otherwise, that a leakage exists at some part of a circuit of such extent as to be a source

Discontinuance of supply on discovery

**Regulations.**

of leakage on  
consumer's  
premises.

of danger, and that such leakage does not exist at any part of the circuit belonging to the undertakers, then and in such case any officer of the undertakers, duly authorised by them in writing, or, if the undertakers so require, an electric inspector, may, for the purpose of discovering whether the leakage exists at any part of a circuit within or upon any consumer's premises, by notice require the consumer at some reasonable time after the service of the notice to permit him to inspect and test the wires and fittings belonging to the consumer and forming part of the circuit.

In any case where the undertakers require the services of an electric inspector under this regulation they shall pay him the prescribed fee.

If on such testing the officer or the electric inspector discovers a leakage from the consumer's wires exceeding one ten thousandth part of the maximum supply current to the premises, or if the consumer does not give all due facilities for inspection and testing, the undertakers shall forthwith discontinue the supply of energy to the premises in question, giving immediate notice of the discontinuance to the consumer, and shall not recommence the supply until they are reasonably satisfied that the leakage has been removed. This regulation shall not affect any power contained in the Order or otherwise enabling the undertakers to discontinue the supply.

Appeal to  
electric  
inspector.

(48.) If any consumer is dissatisfied with the action of the undertakers in refusing to give or in discontinuing or in not recommencing the supply of energy to his premises, the wires and fittings of that consumer may, on his application and on payment of the prescribed fee, be tested for the existence of leakage by an electric inspector.

This regulation shall be endorsed on every notice given under the provisions of either of the two last preceding regulations.

*Arc Lighting.*

Arc lamps to  
be guarded.

(44.) All arc lamps shall be so guarded as to prevent pieces of ignited carbon or broken glass falling from them, and shall not be used in situations where there is any danger of the presence of explosive dust or gas.

Height from  
ground.

(45.) Arc lamps used in any street for public lighting shall be so fixed as not to be in any part at a less height than 10 feet from the ground.

Cut-off  
switch.

(46.) Arc lamps used in any street for private lighting shall be fixed so as not to be in any part at a less height than 8 feet from

the ground, and shall be so screened as to prevent risk of contact with persons. A cut-off switch, fixed in a suitable locked receptacle, shall be provided for every high pressure arc lamp, and such switch shall be of such pattern and construction as will provide :—

**Regulations.**

- (a.) That the lamp can by its means be entirely disconnected from the supply circuit;
- (b.) That the switch itself can be safely operated in the dark without special precautions; and
- (c.) That there shall be no danger of any injurious electrical arcing, sparking, or heating being caused by the operation of the switch.

(47.) If the undertakers make default in complying with any of the preceding regulations, they shall on conviction be liable to a penalty not exceeding 10*l.* for every such default, and to a daily penalty not exceeding 10*l.*

Penalties for default.

The recovery of a penalty under these regulations shall not affect the liability of the undertakers to make compensation in respect of any damage or injury which may be caused by reason of the default.

#### B. (f)—REGULATIONS FOR ENSURING A PROPER AND SUFFICIENT SUPPLY OF ELECTRICAL ENERGY.

(1.) Forty-eight hours at least before the undertakers are ready to commence to supply energy through any feeding, charging, or distributing main, they shall *serve a notice upon the (g) local authority of their intention to commence such supply (h).*

Notice of intention to supply through mains.

(f) The regulations under the heading B. do not occur in the Board of Trade Regulations No. 5 (see footnote on p. 243). The reason is that in provisional orders of that date, regulations on the subject to which the heading B. relates were included in the order itself. The following is now inserted in new regulations for these 1883 companies :

#### "B.—REGULATIONS FOR ENSURING A PROPER AND SUFFICIENT SUPPLY OF ELECTRICAL ENERGY.

"The regulations as to supply on the parallel system contained in s. 27 of the Order shall be varied as follows :—

"(1.) In Regulation (c) the higher limit of standard pressure shall in the case of continuous currents be 250 volts in place of 200 volts, and in the case of alternating currents shall be 250 volts in place of 100 volts, subject, however, to the other provisions of that regulation.

"(2.) The percentage of difference of potential under Regulation (g) shall be one per centum in place of two-and-a-half per centum."

(g) In County of London orders in favour of companies the words "county council and the" are here inserted.

(h) In orders in favour of local authorities, in place of the words in italics the following is substituted, "give public notice of their intention to commence such supply."

**Regulations.**

Undertakers  
to provide  
constant  
supply.

(2.) From and after the time when the undertakers commence to supply energy through any distributing main, they shall maintain a supply of sufficient power for the use of all the consumers for the time being entitled to be supplied from such main; and such supply shall, *except so far as may be otherwise agreed upon from time to time between the (i) local authority and the undertakers (k),* be constantly maintained. Provided that, for the purposes of testing, or for any other purposes connected with the efficient working of the undertaking, the authority by whom the electric inspector is appointed may give permission to the undertakers to discontinue the supply at such intervals of time and for such periods as that authority may think expedient. When the supply is so discontinued, *notice of such discontinuance, and of the probable duration thereof, shall be forthwith served upon the (l) local authority (m).*

Provisions as  
regards  
stoppage.

(3.) The system of distributing mains shall be so arranged that in case it becomes necessary to stop the supply through any portion of a main for more than one hour, for the purposes of repairs, or for any other reason, the stoppage of supply will in no case exceed in amount a maximum power of 200,000 Watts, or extend to the premises of more than 80 consumers, and in the case of every stoppage for more than one hour reasonable notice shall be previously given by the undertakers to every consumer affected thereby except in cases of emergency.

Pressure in  
mains during  
supply.

(4.) During the whole of the period when a supply of energy is required to be maintained by the undertakers in the distributing mains under the order and these regulations, it shall be maintained at a constant pressure, in these regulations termed the "standard pressure"; but the standard pressure may be different for different portions of the distributing mains. Provided that the undertakers shall be deemed to have complied with the requirements of this regulation so long as the pressure does not at any point vary more than 2 per cent. from the corresponding standard pressure in the case of a general supply at high pressure,

(i) In County of London orders in favour of companies, the words "county council and the" are here inserted.

(k) In orders in favour of local authorities in place of the words in italics, the following is substituted, "except so far as the Board of Trade may otherwise from time to time permit."

(l) In County of London orders in favour of companies, the words "county council and the" are here inserted.

(m) In orders in favour of local authorities, in the place of the words in italics, the following is substituted, "public notice shall be given of such discontinuance and of the probable duration thereof."

or 3 per cent. in other cases, unless changes in pressure recur so frequently as to cause unsteadiness in the supply.

**Regulations.**

(5.) The standard pressure shall be fixed by the undertakers, and notice of the amount of such standard pressure shall be given to the local authority before the undertakers commence to supply energy to consumers, and such standard pressure shall not be altered *except by permission of the (n) local authority, and upon such terms and conditions as the local authority may impose*, and after public notice has been given during a period of one month, in such manner as the local authority (o) may require, of the intention of the undertakers to apply for permission to alter the same. The undertakers may appeal against any decision of the local authority under this regulation to the Board of Trade, whose decision shall be final.

Fixing of standard pressure.

Provided that so long as effect is given to the next following regulation the undertakers shall not be bound, under this regulation or any regulation corresponding thereto, previously made, to comply with any condition which has been or may be imposed thereunder, the effect of which is to prohibit any change in the pressure of the supply to any premises except with the consent of the consumer (p).

(6.) Before commencing to give a supply of energy to any consumer, the undertakers shall declare to such consumer the constant pressure at which they propose to supply energy at his terminals. The pressure so declared at any pair of a consumer's terminals shall not at any time be altered or departed from except in consequence of any authorised alteration of the corresponding standard pressure. In the case of a transformation of energy on the consumer's premises, the undertakers shall give the consumer the choice of a supply at either of two different pressures, one of which shall be approximately half the other, and in such case the pressure so chosen by the consumer shall be the declared constant pressure.

Declared pressure at consumer's terminals.

Provided that no change shall be made in the pressure of the supply to any premises which at the date of these regulations are

(n) In the County of London orders, the county council are substituted for the local authority throughout this regulation, with appeal to the Board of Trade. In provincial orders in favour of local authorities, the words "except with permission of the Board of Trade and upon such terms and conditions as the Board of Trade may impose" are substituted for the words in italics.

(o) In provincial orders in favour of local authorities, the Board of Trade are here substituted for the local authority.

(p) This paragraph has been added by the Board of Trade in and since 1901, in the circumstances stated, *post*, p. 258.

**Regulations.**

supplied with energy by the undertakers except with the consent of the consumer.

But where the consumer withholds his consent after the undertakers have offered to comply with the general terms and conditions imposed by the local authority and, if not required to do so under those terms and conditions, also to pay the reasonable cost of or incidental to the change (including compensation for any loss or damage incurred in consequence of the change), the undertakers may appeal to the Board of Trade, and that Board may, if they think fit, give their consent to the change on such terms and conditions as they impose, and the consent of the Board so given shall for the purpose of this regulation have the same effect as the consent of the consumer (q).

The Board of Trade may, if they think it necessary in any case, refer to a single arbitrator appointed by them to determine what terms and conditions it would be proper to impose under this provision in case the consent of the Board is given (q).

Any such arbitration shall be subject to the like provisions as an arbitration in pursuance of a special Act under Part I. of the Board of Trade Arbitrations, &c., Act, 1874, and shall also be subject to the provisions of the Arbitration Act, 1889, as if the arbitration were pursuant to a submission, except that the powers under the last mentioned Act with respect to the costs of the reference and award shall be exercised by the Board of Trade instead of by the arbitrator (q).

Variation of pressure at consumer's terminals.

(7.) The variation of pressure at any consumer's terminals shall not under any conditions of the supply which the consumer is entitled to receive, exceed 4 per cent. from the declared constant pressure.

Penalty for default.

(8.) If the undertakers make default in complying with any of these regulations as to supply, they shall, subject to the provisions of the order, be liable on conviction to a penalty not exceeding 5*l.* for every such default, and to a daily penalty not exceeding 5*l.*

---

These regulations are made subject to the power of the Board of Trade to make such further or other regulations as they may think expedient; and nothing in these regulations shall be construed to authorise the undertakers to lay any electric line or

---

(q) These paragraphs were added by the Board of Trade in and since 1901, in the circumstances stated, *post*, p. 258.

work their undertaking otherwise than in accordance with the order and the principal Act, or to supply energy otherwise than by a system for the time being approved of by the Board of Trade under the order.

---

**Regula-  
tions.**

---

These are the regulations and conditions for securing the safety of the public and for ensuring a proper and sufficient supply of electrical energy, made by the Board of Trade under the provisions of the Electric Lighting Acts, 1882 and 1888, and of the \_\_\_\_\_, referred to in the letter from the Board of Trade to \_\_\_\_\_ of the \_\_\_\_\_ day of \_\_\_\_\_, one thousand eight hundred and ninety-\_\_\_\_\_, and that date shall be deemed to be the date of these regulations.

Assistant Secretary,  
Board of Trade.

---

## ADDENDA IN 1901 TO REGULATIONS.

In Regulations B. "for ensuring a proper and sufficient supply of electrical energy," the Board of Trade had originally added a proviso to Regulation 6 (declared pressure at consumers' terminals) to the following effect:—

"Provided that no change shall be made in the pressure of the supply to any premises which at the date of these regulations are supplied with energy by the undertakers except with the consent of the consumer."

It was found in practice that while consumers as a body may have been willing to allow a change of pressure, as, for example, from 100 to 200 volts, any consumer or small minority of consumers might withhold their consent under this proviso. Many representations having been made to the Board of Trade on this subject, they invited the parties concerned to a conference which was held at the Westminster Town Hall in March, 1901. The late Sir Courtenay Boyle, K.C.B., presided. The Westminster Electric Supply Corporation, the City of London Electric Lighting Company, the Chelsea Electric Supply Corporation, the Metropolitan Electric Supply Corporation, the London County Council, the Corporation of the City of London, and various other Corporations and Metropolitan Boroughs were represented by counsel (*Electrician*, March 8th, 1901, p. 748; March 15th, 1901, p. 882; March 29th, 1901, p. 871).

After hearing and considering the evidence and arguments adduced, the Board of Trade determined to alter the Regulations so as to meet the case of consumers withholding consent. Accordingly the Board of Trade issued to all companies and local authorities then under regulations the following additional regulations:—

### BOARD OF TRADE ELECTRIC LIGHTING REGULATIONS.

REGULATIONS MADE BY THE BOARD OF TRADE FOR ENSURING A  
PROPER AND SUFFICIENT SUPPLY OF ELECTRICAL ENERGY.

Principal  
regulations.

1. In these regulations the expression "principal regulations" means the regulations for ensuring a proper and sufficient supply



of electrical energy made by the Board of Trade under the  
 Order, , and referred to in  
 the letter from the Board of Trade to  
 of the day of .

Regulations.

2. Regulation five of the principal regulations shall be read as if the following provision were added at the end thereof:—

Amendment of Regulation 5 of principal regulations.

“Provided that so long as effect is given to the next following regulation the Undertakers shall not be bound, under this regulation or any regulation corresponding thereto, previously made, to comply with any condition which has been or may be imposed thereunder, the effect of which is to prohibit any change in the pressure of the supply to any premises except with the consent of the consumer.”

3. Regulation six of the principal regulations shall be read as if the following provision were added at the end thereof:—

Amendment of Regulation 6 of principal regulations.

“But where the consumer withholds his consent after the Undertakers have offered to comply with the general terms and conditions imposed by the local authority (*r*) and, if not required to do so under those terms and conditions, also to pay the reasonable cost of or incidental to the change (including compensation for any loss or damage incurred in consequence of the change), the Undertakers may appeal to the Board of Trade, and that Board may, if they think fit, give their consent to the change on such terms and conditions as they impose, and the consent of the Board so given shall for the purpose of this regulation have the same effect as the consent of the consumer.

The Board of Trade may, if they think it necessary in any case, refer to a single arbitrator appointed by them to determine what terms and conditions it would be proper to impose under this provision in case the consent of the Board is given.

Any such arbitration shall be subject to the like provisions as an arbitration in pursuance of a special Act under Part I. of the Board of Trade Arbitrations, &c. Act, 1874, and shall also be subject to the provisions of the Arbitration Act, 1889, as if the arbitration were pursuant to a submission, except that the powers under the last mentioned Act with respect to the costs of the

(*r*) See the footnote (*a*), *ante*, p. 243. The form above inserted is that applicable to provincial companies. In County of London orders, the London County Council is substituted for the “local authority.” In the case of local authorities the Board of Trade is substituted for “local authority.”

**Regula-  
tions.**

---

reference and award shall be exercised by the Board of Trade instead of by the arbitrator.

Made by the Board of Trade this                      day of                      .  
Assistant Secretary,  
Board of Trade.

---

In the case of companies within the administrative County of London the London County Council is substituted for the Local Authority in these Regulations. In all new regulations made since the conference the proviso to Regulation 6 above referred to is omitted altogether. That being so, any alteration of standard pressure must depend upon Regulation 5. The consequence is that standard pressure may be altered with the consent, not of the consumer, but of the Local Authority in the provinces (and in the administrative County of London the London County Council) upon such terms and conditions as they may impose, the Undertakers being entitled to appeal against any decision of the Local Authority to the Board of Trade, whose decision is final. Where the Undertakers are themselves the Local Authority the Board of Trade is substituted for the Local Authority.

---

## REGULATIONS PRESCRIBED BY THE BOARD OF TRADE

UNDER SECTION FOUR OF THE ELECTRIC  
LIGHTING ACT, 1888 (s).

---

### REGULATIONS.

#### *Definitions.*

In the following regulations :—

The expression “ Energy ” means electrical energy, and for the purposes of the Electric Lighting Act, 1888, and these regulations, electrical energy shall be deemed to be an agency within the meaning of the word “ electricity ” as defined in the Electric Lighting Act, 1882.

The expression “ Owner ” means any body or person owning or using or entitled to use any electric lines or works, upon whom notice has been served by the Board of Trade requiring that such electric lines or works shall be continued and used only in accordance with these regulations.

The expression “ Consumer ” means any body or person supplied with energy by the owner.

The expression “ Aerial line ” means an electric line which is placed above ground and in the open air.

The expression “ Service line ” means an electric line through which energy may be supplied or intended to be supplied by the owner to any separate premises.

The expression “ Pressure ” means the difference of electrical potential between any two conductors through which a supply of energy is given, or between any part of either conductor and the earth ; and where the conditions of the supply are such that the pressure may at any time

---

(s) As to the purpose and substance of these regulations, see notes to s. 4 of Electric Lighting Act, 1888, p. 149. These regulations were made in 1897.

**Regulations.**

exceed 500 volts, if continuous, or 250 volts, if alternating, the supply shall be deemed a high pressure supply.

The expression "high pressure" is used in relation to electric lines, conductors, circuits, and apparatus, according to the conditions of the supply delivered through the same or particular portions thereof.

Where these regulations require any metallic body to be "efficiently connected with earth," it shall be connected with the general mass of earth in such manner as will ensure at all times an immediate and safe discharge of electrical energy.

Other expressions which are defined in the Electric Lighting Acts, 1882 and 1888, have the same respective meanings in these regulations.

*General.*

Regulations not to imply power to interfere with streets.

(1.) Nothing in these regulations shall be deemed to authorise the owner to break up or interfere with any street.

Prohibition of earth connection.

(2.) The owner shall not permit any part of any circuit to be connected with earth except so far as may be necessary for carrying out the provisions of any regulations made by the Board of Trade, unless the connection is for the time being approved by the Board of Trade with the concurrence of the Postmaster-General, and is made in accordance with the conditions (if any) of such approval.

Pressure of supply to consumers.

(3.) The pressure of a supply delivered to any consumer shall not exceed 250 volts at any pair of terminals, except with the express approval of the Board of Trade. Such approval will only be given for special purposes and on the joint application of the consumer and the owner, and the supply will be subject to such further regulations as the Board of Trade may from time to time prescribe.

Limits of high pressure.

(4.) The pressure between any two conductors, or between any part of either conductor and the earth shall not exceed 3,000 volts.

Maximum current in conductors.

(5.) The maximum working current in any conductor shall not be sufficient to raise the temperature of the conductor or any part thereof to such an extent as to materially alter the physical condition or specific resistance of the insulating covering, if any, or in any case to raise such temperature to a greater extent than 30° Fahr. The cross sectional area and conductivity at joints

must be sufficient to avoid local heating, and the joints must be protected against corrosion.

**Regulations.**

(6.) The sectional area of the conductor in any electric line laid or erected in any street after the date of these regulations shall not be less than the area of a circle of one-tenth of an inch diameter, and where the conductor is formed of a strand of wires, each separate wire shall be at least as large as No. 20 standard wire gauge.

Minimum size of conductors.

(7.) All material used for insulating electric lines or apparatus shall be of the best quality, and thoroughly durable and efficient, having regard to the conditions of its use. Suitable provision shall be made for the protection of the insulating material against injury or removal.

Specification of insulating material.

If the protection so provided be wholly or partly metallic, it shall be efficiently connected with earth.

(8.) Every electric line, other than a service line, shall be tested for insulation after having been placed in position, and before it is used for the purposes of supply, the testing pressure being at least 200 volts, and the owner shall duly record the results of the tests of each line or section of a line.

Insulation test of electric lines.

(9.) The insulation of every complete circuit used for the supply of energy, including all machinery, apparatus, and devices forming part of, or in connexion with, such circuit, shall be so maintained that the leakage current shall not under any conditions exceed one-thousandth part of the maximum supply current; and suitable means shall be provided for the immediate indication and localisation of leakage. Every leakage shall be remedied without delay.

Maintenance of insulation.

Every such circuit shall be tested for insulation at least once in every week, and the owner shall duly record the results of the testings.

Provided that where the Board of Trade have approved of any part of any electric circuit being connected with earth, the provisions of this regulation shall not apply to that circuit so long as the connexion with earth exists.

(10.) Every high pressure conductor laid or erected in any street after the date of these regulations shall be continuously covered with insulating material to a thickness of not less than one-tenth part of an inch, and in cases where the extreme difference of potential in the circuit exceeds 2,000 volts, the thickness of insulating material shall not be less in inches or parts of an inch than the number obtained by dividing the number expressing the volts by 20,000.

High pressure conductors to be covered.

**Regulations.**

Testing of insulation of all parts of any high pressure circuit.

(11.) A high pressure circuit shall not be brought into use unless the insulation of every part thereof has withstood the continuous application during one hour of pressure exceeding the maximum pressure to which it is intended to be subjected in use, that is to say, in the case of every electric line a pressure twice the said maximum pressure, and in the case of every machine, device, or apparatus, a pressure 50 per cent. greater than the said maximum pressure.

The owner shall duly record the results of each test.

Quick-acting cut-off for high pressure lines, etc.

(12.) Every high pressure electric line, conductor, or other apparatus shall be protected by a suitable automatic quick-acting cut-off.

Provided that it shall not be incumbent upon the owner to provide such a cut-off for the outer conductor of a concentric main which is, with the approval of the Board of Trade, efficiently connected with earth.

Transformers.

(13.) In every case where a high pressure supply is transformed for the purpose of supply to one or more consumers, some suitable automatic and quick-acting means shall be provided to protect the consumer's wires from any accidental contact with or leakage from the high pressure system, either within or without the transforming apparatus.

Limit of power in high pressure electric line.

(14.) No high pressure electric line shall be used for the transmission of more than 100,000 Watts, or in the case of an aerial line 50,000 Watts, except with the consent in writing of the Board of Trade, and efficient means shall be provided to prevent this limit being at any time exceeded.

Protection from lightning.

(15.) Where any portion of any electric line or any support for an electric line is exposed in such a position as to be liable to injury from lightning, it shall be efficiently protected against such injury.

Accidents to be reported.

(16.) Where any accident by explosion or fire, or any other accident of such kind as to have caused or to be likely to have caused loss of life or personal injury has occurred at any part of any electric line or work, the owner shall give immediate notice thereof to the Board of Trade (t).

---

(t) Under the Factory and Workshop Act, 1901 (1 Edw. 7, ch. 22), s. 19, notice must also be given to the inspector for the district. Notice may also have to be given to the Board of Trade under the Notice of Accidents Act, 1894 (57 & 58 Vict. ch. 28), ss. 1 and 2, and paragraphs 2 and 3 of the Schedule.

(17.) Every electric line shall be placed and used with due regard to electric lines and works from time to time used or intended to be used for the purpose of telegraphic communication and to the currents of such electric lines and works, and every reasonable means shall be employed in the placing and use of electric lines to prevent injurious affection, whether by induction or otherwise, to any such electric lines or works or the currents therein.

### Regulations.

Precautions against injurious affection by induction.

(18.)—(a.) The owner on receipt of these regulations shall forthwith serve upon the Postmaster-General a notice describing every electric line used for the supply of energy, together with a plan showing the mode and position in which such electric line is laid.

Notice to Postmaster-General.

(b.) The Postmaster-General, upon consideration of such notice and plan, may require such alteration in the position or mode of laying, or mode of use of such electric line, or compliance with such other conditions as he may think necessary for the due protection of the electric lines or works of the Postmaster-General, and any failure on the part of the owner to comply with such requirements shall be deemed to be a non-compliance with these regulations.

(c.) Any notice required to be served upon the Postmaster-General under these regulations may be served by being addressed to him, and left at, or transmitted through the post to the General Post Office, London, and any notice required to be served on the owner may be served by being addressed to him and left at, or transmitted through the post to, his office or last known place of address.

### *Aerial Lines.*

(19.) Every aerial line shall be attached to supports at intervals not exceeding 200 feet where the direction of the line is straight, or 150 feet where the direction is curved, or where the line makes a horizontal angle at the point of support.

Maximum intervals between supports.

(20.) Every support for an aerial line shall be of a durable material, and properly stayed against forces due to wind pressure, change of direction of the line, or unequal lengths of span. The factor of safety for aerial lines and suspending wires shall be at least 6 and for all other parts of the structure at least 12, taking the maximum possible wind pressure at 50 pounds per square foot. No addition need be made for a possible accumulation of snow.

Supports, construction and erection of.

Every support, if of metal, shall be efficiently connected with earth.

**Regulations.**

Attachment of aerial lines.

(21.) All aerial lines shall be attached to insulators, and shall be so guarded that they cannot fall away from the support. Conductors covered with insulating material shall not be attached to the insulators by uninsulated metal binders.

Height from ground and distance from buildings, etc.

(22.) An aerial line shall not in any part thereof be at a less height from the ground than 18 feet, or where it crosses a street 30 feet, or within 5 feet measured horizontally or 7 feet measured vertically from any building or erection other than a support for the line, except where brought into a building for the purpose of supply.

Service lines from aerial lines.

(23.) Service lines from aerial lines shall be led as directly as possible to insulators firmly attached to some portion of the consumer's premises which is not accessible to any person without the use of a ladder or other special appliance, and from this point of attachment they shall be enclosed and protected in accordance with the subsequent regulations as to electric lines on the consumer's premises. Every portion of any service line which is outside a building but is within 7 feet from such building shall be completely enclosed in stout india-rubber tubing.

Angle of crossing thorough-fares.

(24.) Where an aerial line crosses a street, the angle between the line and the direction of the street at the place of crossing shall not be less than 60 degrees, and the spans shall be as short as possible.

Lines crossing metallic substance.

(25.) Where an aerial line crosses, or is in proximity to, any metallic substance, precautions shall be taken by the owner against the possibility of the line coming into contact with the metallic substance, or of the metallic substance coming into contact with the line by breakage or otherwise.

Suspending wires.

(26.) Every high pressure aerial line shall be efficiently suspended by means of insulating ligaments to suspending wires, so that the weight of the line does not produce any sensible stress in the direction of its length. All suspending wires, if of iron or steel, shall be galvanised.

Discharge of pressure in case of fire.

(27.) In the case of any high pressure aerial line exceeding one half mile in total length, means shall be provided whereby the pressure may be discharged from any portion of the line erected over or alongside of any building or buildings without loss of time in case of fire or other emergency.

Maintenance.

(28.) Every aerial line, including its supports and all the structural parts and electrical appliances and devices belonging



to or connected with the line, shall be duly and efficiently supervised and maintained as regards both electrical and mechanical conditions.

**Regulations.**  
—

(29.) An aerial line shall not be permitted to remain erected after it has ceased to be used for the supply of energy, unless the owner intends within a reasonable time again to take it into use.

Disused aerial lines to be removed.

*Electric Lines other than Aerial Lines.*

(30.) All conduits, pipes, casings, and street boxes used as receptacles for electric lines shall be constructed of durable material, and where laid under carriage ways shall be of ample strength to prevent damage from heavy traffic; and reasonable means shall be taken by the owner to prevent accumulation of gas in such receptacles.

Construction of receptacles for electric lines.

(31.) Where any electric line crosses, or is in proximity to, any metallic substance, special precautions shall be taken by the owner against the possibility of any electrical discharge to the metallic substance from the line or from any metal conduit pipe or casing enclosing the line.

Crossing pipes, etc.

(32.) All metal conduits, pipes, or casings, containing any electric line shall be efficiently connected with earth; and shall be so jointed and connected across all street boxes and other openings as to make good electrical connexion throughout their whole length.

Electric continuity of metal conduits, pipes, or casings.

(33.) Where isolated lengths of metal conduit, pipe, or casing are used for the protection of any electric line at road crossings or similar positions, special precautions shall be taken to prevent the possibility of any electrical charging thereof.

Precautions against charging of short lengths of pipe, etc.

(34.) Where the conductors of electric lines placed in any conduit are not continuously covered with insulating material, they shall be secured in position, and no unfixed uninsulated material of a conducting nature shall be contained in the conduit. No such conductor shall be at a higher potential than 300 volts.

Precautions to be taken when bare conductors are used.

Adequate precautions shall also be taken to ensure that no accumulation of water shall take place in any part of the conduit, and to prevent any dangerous access of moisture to the conductors or the insulators.

In the case of any such electric lines laid in conduits after the date of the notice prescribing these regulations, the insulators shall be so disposed that they can be readily inspected.

**Regulations.**

High pressure lines laid above ground.

(35.) Every portion of any high pressure electric line placed above the surface of the ground, or in any subway not in the sole occupation of the owner, shall be completely enclosed either in a tube of highly insulating material embedded in brickwork, masonry, or cement concrete, or in strong metal casing efficiently connected with earth.

High pressure lines laid in proximity to other electric lines or to the surface of the ground.

(36.) Where any high pressure electric line is laid beneath the surface of the ground, efficient means shall be taken to render it impossible that the surface of the ground or any neighbouring electric line or conductor shall become charged by leakage from the high pressure electric line.

*Street Boxes.*

Street boxes.

(37.) In addition to the provisions contained in Regulation 30 as to the construction of receptacles for electric lines, the following regulations shall be observed with respect to the construction of street boxes :—

- (a.) The covers of all street boxes shall be so secured that they cannot be opened except by means of a special appliance.
- (b.) The covers of all street boxes containing high pressure apparatus other than cables shall be connected to strips of metal laid immediately underneath the adjacent roadway, and efficient means shall be taken to render it impossible that the covers or other exposed parts of these boxes, or any adjacent material forming the surface of the street, shall become electrically charged, whether by reason of leakage, defect, or otherwise.
- (c.) Where street boxes are used as transformer chambers, reasonable means shall be taken to prevent as far as possible any influx of water, either from the adjacent soil or by means of pipes ; and in the case of any such street box exceeding one cubic yard in capacity, ample provision shall be made, by ventilation or otherwise, for the immediate escape of any gas which may by accident have obtained access to the box, and for the prevention of danger from sparking.
- (d.) All street boxes shall be regularly inspected for the presence of gas, and if any influx or accumulation is discovered, the owner shall give immediate notice to the authority or company whose gas mains are laid in the neighbourhood of the street box.

*Transforming Stations.***Regulations.**

(38.) Transforming stations or points in a system of distribution, in which a high pressure supply is transformed for the purpose of supply to a consumer, and which are not on the consumer's premises, shall be established in suitable places which are in the sole occupation and charge of the owner.

Transforming stations.

*Consumer's Premises.*

(39.) The owner shall be responsible for all electric lines, fittings, and apparatus belonging to him, or under his control, which may be upon a consumer's premises, being maintained in a safe condition and in all respects fit for supplying energy.

Responsibility of owner for his lines, etc., on consumer's premises.

(40.) In delivering the energy to a consumer's terminals, the owner shall exercise all due precautions so as to avoid risk of causing fire on the premises.

Fire risks.

(41.) A suitable safety fuse or other automatic disconnecter shall be inserted in each service line within a consumer's premises as close as possible to the point of entry, and contained within a suitable locked or sealed receptacle of fireproof construction, except in cases where the service line is protected by fuses in a street box.

Main fuses or disconnectors.

(42.) All electric lines and apparatus placed on any consumer's premises shall be highly insulated and thoroughly protected against injury to the insulation or access of moisture, and any metal forming part of the electric circuit shall not, unless efficiently connected with earth, be exposed so that it can be touched. All electric lines shall be so fixed and protected as to prevent the possibility of electrical discharge to any adjacent metallic substance.

Treatment of electric lines and apparatus on consumer's premises.

(43.) Where the general supply of energy is a high pressure supply, and transforming apparatus is installed on a consumer's premises, the whole of the high pressure service lines, conductors, and apparatus, including the transforming apparatus itself, so far as they are on the consumer's premises, shall be completely enclosed in solid walls or in strong metal casing efficiently connected with earth and securely fastened throughout.

Transformers and high pressure apparatus to be enclosed in metal, etc.

*Arc Lighting.*

(44.) All arc lamps shall be so guarded as to prevent pieces of ignited carbon or broken glass falling from them, and shall not

Arc lamps to be guarded.

**Regulations.**

be used in situations where there is any danger of the presence of explosive dust or gas.

**Height from ground.**

(45.) Arc lamps used in any street for public lighting shall be so fixed as not to be in any part at a less height than 10 feet from the ground.

Arc lamps used in any street for private lighting shall be fixed so as not to be in any part at a less height than 8 feet from the ground, and shall be so screened as to prevent risk of contact with persons.

**Cut-off switch.**

(46.) A cut-off switch, fixed in a suitable locked receptacle, shall be provided for every high pressure arc lamp, of such pattern and construction as will provide :—

- (a.) That the lamp can by its means be entirely disconnected from the supply circuit ;
  - (b.) That the switch itself can be safely operated in the dark without special precautions ; and
  - (c.) That there shall be no danger of any injurious electrical arcing, sparking, or heating being caused by the operation of the switch.
-

## FORM OF BYELAWS

BY URBAN AUTHORITIES UNDER SECTION  
THIRTEEN OF PUBLIC HEALTH ACTS AMENDMENT  
ACT, 1890 (*u*).

---

BYELAWS MADE IN PURSUANCE OF PART II. OF THE PUBLIC HEALTH  
ACTS AMENDMENT ACT, 1890, BY THE LOCAL BOARD FOR THE  
DISTRICT OF \_\_\_\_\_, ACTING AS THE URBAN SANITARY  
AUTHORITY FOR THE SAID DISTRICT, AND HEREIN-AFTER  
REFERRED TO AS THE URBAN AUTHORITY.

I. ALL posts, wires, tubes, and other apparatus which have been or may hereafter be stretched or placed over, along, or across any street for the purpose of any telegraph, telephone, lighting, railway signalling, or other purpose, and not exempted from the operation of these byelaws by or under the provisions of the above-mentioned Act, must be stretched and placed in conformity with the following rules :—

- (1.) Every wire or tube must be so stretched or placed as not to be at any point at a less height above the street than *thirty feet* where it crosses the street, and elsewhere than *eighteen feet*, except with the consent in writing of the urban authority.

Provided that where a wire or tube is stretched or placed along a bridge which is carried over any street it may be stretched or placed at a less height than as above mentioned, so that it be not lower at any point than the structure of the bridge at that point.

- (2.) Every wire or tube must be securely attached to adequate supports of durable material and construction, and such supports must be situate at distances of not more than

---

(\*) See the notes to s. 6 of Electric Lighting Act, 1882. These byelaws do not apply to electric undertakings authorised by the Electric Lighting Acts, 1882 to 1888. They will be applicable to the class of undertakings dealt with by s. 4 of the Act of 1888. See *ante*, p. 149. The Public Health Acts Amendment Act, 1890, is an adoptive Act merely. It does not apply to the administrative County of London.

**Byelaws.**  

---

*one hundred and fifteen yards apart, except in any case where the urban authority consent in writing to an increased length of span.*

- (3.) Every support must be efficiently secured against forces due to wind pressure, change of direction of wires, and unequal lengths of span.
- (4.) Every wire or tube attached to a chimney, wall, or other part of a building must be efficiently supported by angle plates of iron or other device approved by the urban authority.
- (5.) Every wire or tube must be so stretched, placed, and maintained, and every support, appliance, insulator, and other apparatus used in connexion with such wire or tube must be so constructed and maintained as not to be dangerous or to cause obstruction to the public.
- (6.) On reasonable notice being given by the urban authority to the owner of any wire or tube, access at all reasonable times for the purpose of the inspection and examination of such wire or tube, and every support and other apparatus used in connexion therewith must be given or secured by such owner to the urban authority, their officers, and servants.

II. All wires and tubes, and all supports and other apparatus used in connexion therewith, which are stretched or placed otherwise than in conformity with these byelaws, are hereby prohibited and must be removed.

III. Every wire or tube, after it has ceased to be used for the purpose for which it was stretched or placed, or for some similar or other proper purpose, must be removed unless its owners intend within a reasonable time again to take it into use.

IV. Notice in writing of every wire or tube stretched or placed above, over, along, or across any street must be given to the urban authority, signed by the owner of such wire or tube, or his agent, and containing particulars of the use or intended use of the wire or tube, the nature and position of the several supports, and the lengths of span between the several supports. Such notice must be given, in the case of wires or tubes stretched or placed before these byelaws come into operation, within *six months* thereafter, and, in the case of wires or tubes stretched or placed after these byelaws come into operation, within one month after the same are stretched or placed.

**Byelaws.**  

---

V. Any person who causes any post, wire, tube, or other apparatus to be stretched or placed for any of the above-mentioned purposes otherwise than in conformity with these byelaws, or who fails to remove any such things as are required by these byelaws to be removed, is liable to a penalty not exceeding *five pounds* for each offence, and to a daily penalty not exceeding *forty shillings*.

---

**ELECTRIC LIGHTING**  
**FORM OF ACCOUNTS PRESCRIBED BY THE**

\_\_\_\_\_ Electric  
**THE** \_\_\_\_\_

*Year ending*

**No. I.—STATEMENT AS TO LOANS AUTHORISED FOR THE PURPOSES OF  
 (LICENSE) prior to**

Amounts sanctioned.	Amount borrowed.			
	At per cent.	At per cent.	At per cent.	Total.

**Dr.**

**No. II.—CAPITAL ACCOUNT for**

_____	Expenditure up to 31st December, 18 .	Expended during the Year.	Total Expenditure to 31st December, 18 .
	£ s. d.	£ s. d.	£ s. d.
<i>To expenditure to 31st December, 18 .</i>			
<i>Expenditure since that date.</i>			
1. To lands, including law charges incidental to acquisition.			
2. To value of lands appropriated for electrical purposes, as per contra.			
3. To buildings - - - -			
4. To machinery - - - -			
5. To accumulators at generating and distributing stations.			
6. To mains, including cost of laying the mains and services.			
7. To transformers, motors, etc. - -			
8. To meters, and fees for certifying -			
9. To electrical instruments, etc. -			
10. To general stores (cable, mains, lamps).			
11. To purchase of patents or patent rights.			
12. To transfer to sinking fund of value of lands sold, as per contra.			
13. To amount applied to the reduction of principal of borrowed money from value of lands sold, as per contra.			
14. To other items (to be specified) -			
Total expenditure - -			
To balance of capital account - -	- - -	- - -	
		£	



ACTS, 1882 to 1890.

BOARD OF TRADE FOR A LOCAL AUTHORITY.

Lighting Order (License).

(Name of Local Authority).

31st December, 18 .

THE UNDERTAKING REFERRED TO IN THE ABOVE-MENTIONED ORDER

31st December, 18 .

Amount repaid.				Amount sanctioned but not borrowed.
At per cent.	At per cent.	At per cent.	Total.	

the Year ending 31st December, 18 .

Cr.

	Receipts up to 31st December, 18 .	Received during the Year.	Total Receipts to 31st December, 18 .
	£ s. d.	£ s. d.	£ s. d.
1. By amount raised by loans - -			
2. By sale of patents or patent rights, etc.			
3. By value of lands belonging to authority appropriated for electrical purposes.			
4. By value of surplus lands sold -			
5. By other receipts (to be specified) -			
		£	

T 2

Dr.

No. III.—REVENUE ACCOUNT for

	£	s.	d.	£	s.	d.
<i>A.—To generation of Electricity.</i>						
1. To coals or other fuel, including dues, carriage, unloading, storing, and all expenses of placing the same on the works.						
2. To oil, waste, water, and engine-room stores - -						
3. To wages at generating stations - - - -						
4. To repairs and maintenance, as follows :—						
Buildings - - - - -	£	s.	d.			
Engines, boilers - - - -						
Dynamos, exciters, transformers, motors, etc. - - - -						
Other machinery, instruments, and tools. - - - -						
Accumulators and accessories - - - -						
Less received for old material - - - -						
5. To other items (to be specified) - - - -						
<i>B.—To distribution of Electricity.</i>						
1. To wages and other remuneration to linesmen, fitters, labourers.						
2. To repairs, maintenance, and renewals of mains of all classes, including materials and laying the same.						
Less amounts refunded - - - -						
3. To repairs, maintenance, and renewals of transformers, meters, switches, fuses, and other apparatus on consumers' premises, together with cost of materials and lamps sold, as per contra.						
4. To repairs, maintenance, and renewals of apparatus at distributing stations.						
<i>C.—To Public Lamps.</i>						
1. To attending and repairs - - - - -						
2. To renewals of lamps - - - - -						
<i>D.—To Royalties, etc.</i>						
1. To royalties, etc., payable for use of patents or patent processes.						
<i>E.—To Rents, Rates, and Taxes.</i>						
1. To rents payable - - - - -						
2. To rates and taxes - - - - -						
Carried forward - - - -	£					

the Year ending 31st December, 18 .

Cr.

	£	s.	d.	£	s.	d.	£	s.	d.
1. By Balance from last account -									
Less bad debts written off -									
2. By sale of current per meter at per B. T. U.									
3. By sale under contracts - - - - -									
4. By public lighting - - - - -									
5. By rental of meters and other apparatus on consumers' premises.									
6. By sale and repairs of lamps, arc or incandescent									
By sale and repairs of other apparatus - -									
7. By royalties, licenses, etc. - - - - -									
8. By rents receivable - - - - -									
9. By fees for inspection of maps - - - - -									
10. By other items (to be specified) - - - - -									
Carried forward -	£								

Dr.		No. III.—REVENUE	
		£ s. d.	£ s. d.
<i>F.—To Management Expenses.</i>			
1. To salaries, viz. :—			
Engineers' department - - - -			
Accountant and clerical staff - - -			
2. To salaries or commissions of collectors - - -			
3. To stationery and printing - - - -			
4. To general establishment charges - - - -			
<i>G.—To Law and Parliamentary Charges.</i>			
1. To law expenses - - - -			
<i>H.—To Special Charges.</i>			
1. To insurances, etc. - - - -			
2. To expenses for certification of meters - - -			
Total expenditure - - - -			
Amount carried to net revenue account - - -			
Balance carried to next account to provide for bad debts.			
		£	

Dr.		No. IV.—NET	
		£ s. d.	
1. To interest on mortgage debt accrued due to date - - -			
2. To instalments of principal of money borrowed - - -			
3. To amount transferred to sinking fund where such fund is authorised.			
4. To expenses of executing the Order (License) not included in III. and not chargeable to capital.			
5. To payments to reserve fund, where such fund is authorised by the Order (License).			
6. To sum applied to local rate - - - -			
To balance carried forward - - - -			
		£	

Dr.		No. V.—SINKING	
	Stock.	£ s. d.	
	£ s. d.		
1. To amount paid for purchase of (nature of investment to be specified).			
2. To stock sold during period of account - -			
3. To amount of principal of borrowed money repaid.			
To amount of balance to next account - -			
	£		



Dr.

No. VI.—RESERVE

	Stock.	£ s. d.
	£ s. d.	
1. To amount paid for purchase of (nature of investment to be specified).		
2. To stock sold - - - - -		
3. To sum transferred to Revenue Account - -		
To amount of balance to next account - -		
£		

Dr.

No. VII.—GENERAL

<i>Liabilities.</i>	£ s. d.
1. To capital account : Amount received as per Account No. II.	
2. To sundry creditors - - - - -	
3. To net revenue account : balance at credit thereof - -	
4. To sinking fund account - - - - -	
5. To reserve fund account - - - - -	
6. To other items (to be specified) - - - - -	
£	

March, 18 .

## No. VIII.—STATEMENT OF ELECTRICITY

Quantity generated in B.T. Units	Quantity sold.			
	Public Lamps.	By Contract.	Private Consumers by Meter.	Total sold.

## FUND ACCOUNT.

Cr.

	Stock.	£ s. d.
	£ s. d.	
1. By balance brought from last account - -		
2. By amount transferred from Net Revenue Account.		
3. By stock purchased - - - - -		
4. By amount realised by sale of stock (nature of stock to be specified).		
£		

## BALANCE SHEET.

Cr.

<i>Assets.</i>	£ s. d.
1. By capital account: Amount expended for works as per Account No. II.	
2. By stores on hand at 31st December, 18 :-	£ s. d.
Coal - - - - -	
Oils, waste, etc. - - - - -	
General - - - - -	
3. By sundry debtors for current supplied to 31st December, 18 .	
4. By other debtors - - - - -	
5. By securities held (cost price) - - - - -	
6. By other items (to be specified) - - - - -	
7. By cash with Treasurer - - - - -	
8. By cash in hand - - - - -	
£	

Chairman.

Clerk.

## GENERATED, SOLD, ETC.

Quantity used on Works.	Total Quantity accounted for.	Quantity not accounted for.	Number of Public Lamps.	Total Maximum Supply demanded.

## ELECTRIC LIGHTING

## FORM OF ACCOUNTS PRESCRIBED BY THE BOARD

\_\_\_\_\_ Electric Lighting

*THE* \_\_\_\_\_*Year ending*

No. I.—STATEMENT OF SHARE CAPITAL APPROPRIATED FOR THE PURPOSES OF  
On the 31st

	Description of Capital.	Authorised by.	Number of Shares issued.	Nominal Amount of Shares.

No. II.—STATEMENT OF LOAN CAPITAL APPROPRIATED FOR THE PURPOSES OF  
On the 31st

Description of Loan.	Amounts Borrowed.			
	At per cent.	At per cent.	At per cent.	Total.



ACTS, 1882 to 1890.

OF TRADE FOR AN ELECTRIC LIGHTING COMPANY.

Order (License).

\_\_\_\_\_COMPANY.

31st December, 18 .

THE UNDERTAKING AUTHORISED BY THE ABOVE-MENTIONED ORDER (LICENSE).

December, 18 .

	Called-up per Share.	Total Paid-up.	Issued not Paid-up.	Remaining Un- issued.	Total Amount Authorised.

THE UNDERTAKING AUTHORISED BY THE ABOVE-MENTIONED ORDER (LICENSE).

December, 18 .

	Remaining Borrowing Powers.	Total Amount of Borrowing Powers.	

Total Share Capital Paid-up, see No. I. - - - £

„ Loan „ Borrowed, see No. II. - - - £

Total Capital received - - - £

## No. III.—CAPITAL

Dr.

for the Year ending

	Expenditure up to 31st Dec., 18 .	Expended during the Year.	Total Expenditure to 31st Dec., 18 .
<i>To expenditure to 31st December, 18 .</i>	£ s. d.	£ s. d.	£ s. d.
<i>Expenditure since that date.</i>			
1. To lands, including law charges incidental to acquisition.			
2. To buildings - - - - -			
3. To machinery - - - - -			
4. To accumulators at generating and distributing stations.			
5. To mains, including cost of laying the mains.			
6. To transformers, motors, etc. -			
7. To meters, and fees for certifying under the Act.			
8. To electrical instruments, etc. -			
9. To general stores (cable, mains, lamps).			
10. To purchase of patents or patent rights.			
11. To cost of licence, provisional order, etc.			
12. To special items - - - - -			
Total expenditure - -			
To balance of Capital Account -	- - -	- - -	
		£	

Provision for depreciation of works is made by a debit of £ to

## No. IV.—REVENUE

Dr.

for the Year ending

	£ s. d.	£ s. d.
<i>A.—To generation of Electricity.</i>		
1. To coals or other fuel, including dues, carriage, unloading, storing, and all expenses of placing the same on the works.		
2. To oil, waste, water, and engine-room stores		
Carried forward - - - - -		

## ACCOUNT

31st December, 18 .

Cr.

	Receipts up to 31st Dec., 18 .	Received during Year.	Total Receipts to 31st Dec., 18 .
	£ s. d.	£ s. d.	£ s. d.
By ordinary shares of £ - - -			
„ do. do. of £ - - -			
„ preference do. of £ - - -			
„ debenture stock - - -			
„ mortgages and bonds - - -			
„ amounts received in anticipation of calls.			
„ sale of patents or patent rights, etc.			
„ other receipts (to be specified) -			
		£	

Revenue Account transferred to Depreciation Fund Account, No. VII.

## ACCOUNT

31st December, 18 .

Cr.

	£ s. d.	£ s. d.
1. By sale of current per meter at per B. T. U.		
2. By sale under contracts - - -		
3. By public lighting - - -		
Carried forward - - -		

Dr.

No. IV.—REVENUE

	£ s. d.	£ s. d.
Brought over - - -		
3. To proportion of salaries of engineers, superintendents, and officers, as certified by the managing director, chairman, or engineer.		
4. To wages and gratuities at generating stations -		
5. To repairs and maintenance, as follows :—		
1. Buildings - - -	£ s. d.	
2. Engines, boilers - - -		
3. Dynamos, exciters, transformers, motors, etc.		
4. Other machinery, instruments, and tools.		
5. Accumulators and accessories.		
Less received for old material		
6. To special items - - - - -		
<i>B.—To distribution of Electricity.</i>		
1. To proportion of salaries of superintendents and officers, as certified by managing director, chairman, or engineer.		
2. To wages and gratuities to linesmen, fitters, labourers.		
3. To repairs, maintenance, and renewals of mains of all classes, including materials and laying the same.	£ s. d.	
Less amounts refunded - - -		
4. To repairs, maintenance, and renewals of transformers, meters, switches, fuses, and other apparatus on consumers' premises.		
5. To repairs, maintenance, and renewals of apparatus at distributing stations.		
<i>C.—To Public Lamps.</i>		
1. To attending and repairs - - - - -		
2. To renewals of lamps - - - - -		
<i>D.—To Royalties, etc.</i>		
To royalties, etc., payable for use of patents or patent processes.		
Carried forward - - -		

ACCOUNT—*continued.*

Cr.

	<div>£ s. d.</div>	<div>£ s. d.</div>
Brought over - - -		
4. By rental of meters and other apparatus on consumers premises.		
5. By sale and repairs of lamps, arc or incan- descent.		
,, sale and repairs of other apparatus -		
6. By royalties, licenses, etc. - - - -		
7. By rents receivable - - - - -		
8. By transfer fees - - - - -		
9. By other items (to be specified) - - -		
Carried forward - -		

Dr.

No. IV.—REVENUE

	£	s.	d.	£	s.	d.
Brought over - -						
<i>E.—To Rents, Rates, and Taxes.</i>						
1. To rents payable - - - - -						
2. To rates and taxes - - - - -						
<i>F.—To Management Expenses.</i>						
1. To directors' remuneration - - - - -						
2. To salaries of managing engineers, secretary, accountants, clerks, messengers, as certified by managing director, chairman, or engineer.						
3. To salaries or commissions of collectors - - - - -						
4. To stationery and printing - - - - -						
5. To general establishment charges - - - - -						
6. To auditors of company - - - - -						
7. To auditor appointed under the provisions of the Order.						
<i>G.—To Law and Parliamentary Charges.</i>						
To law expenses - - - - -						
<i>H.—To Depreciation.</i>						
1. To depreciation in respect of leasehold works - -						
2. Ditto buildings - - - - -						
3. Ditto plant, machinery, etc.						
<i>I.—To Special Charges.</i>						
1. To insurances, superannuation, etc. - - - - -						
2. To expenses for certification of meters - - - - -						
Total expenditure - - - - -						
Balance carried to net revenue - - - - -						
	£					

Dr.

No. V.—NET

	£	s.	d.
1. To interest on debentures accrued due to date - - - - -			
2. To interest on mortgages and bonds accrued due to date - - - - -			
3. To interest on temporary loans accrued due to date - - - - -			
4. To dividend on preference stocks - - - - -			
5. To balance applicable to dividend on ordinary stock or shares - - - - -			
	£		



Dr.	No. VI.—RESERVE
	£ s. d.
1. Amount paid out for - - - - -	
2. Amount of balance to next account - - - - -	
£	

Dr.	No. VII.—DEPRECIATION
	£ s. d.
1. To balance - - - - -	
£	

Dr.	No. VIII.—GENERAL
<i>Liabilities.</i>	£ s. d.
1. To capital account : Amount received as per Account No. III.	
2. To sundry tradesmen and others, due on construction of plant and machinery, fuel, stores, etc., to 31st December, 18 .	
3. To sundry creditors on open accounts - - - - -	
4. To net revenue account : balance at credit thereof - - -	
5. To reserve fund account     ,,     ,,     -     -     -	
6. To depreciation fund account     ,,     -     -     -	
£	

March, 18 .

	No. IX.—STATEMENT OF			
Quantity Generated in B.T. Units.	Quantity sold.			
	Public Lamps.	By Contract.	Private Consumers by Meter.	Total sold.



## FUND ACCOUNT.

Cr.

	£	s.	d.
1. By balance brought from last account - - - - -			
2. By amount brought from net revenue account - - - - -			
3. By interest on amount invested - - - - - (Description of Investments to be specified.)			
£			

## FUND ACCOUNT.

Cr.

	£	s.	d.
1. By balance from last account - - - - -			
2. By interest on investments - - - - -			
3. By amount brought from revenue account (see No. IV. H.) - (Description of Investments to be specified.)			
£			

## BALANCE SHEET.

Cr.

<i>Assets.</i>		£	s.	d.
1. By capital account: Amount expended for works as per Account No. III.				
2. By stores on hand at 31st December, 18 :-	£	s.	d.	
Coal - - - - -				
Oils, waste, etc. - - - - -				
General - - - - -				
3. By sundry debtors for amounts paid on account of contracts in course of completion.				
4. By preliminary expenses - - - - -				
5. By sundry debtors for current supplied to 31st December, 18				
6. By other debtors - - - - -				
7. By cash at bankers :-				
Messrs. - - - - -				
Messrs. - - - - -				
Messrs. (amount on deposit) - - - - -				
8. By cash in hand - - - - -				
£				

*Chairman.**Manager and Secretary.*

## ELECTRICITY GENERATED, SOLD, ETC.

Quantity used on Works.	Total Quantity accounted for.	Quantity not accounted for.	Number of Public Lamps.	Total Maximum Supply demanded.

## ORDER IN COUNCIL

### LEGALISING NEW DENOMINATIONS OF STANDARDS FOR THE MEASUREMENT OF ELECTRICITY.

[1894. No. 211.]

*At the Court at Osborne House, Isle of Wight, the 28rd day of August, 1894.*

*Present : The Queen's Most Excellent Majesty in Council.*

52 & 53 Vict.  
c. 21.

WHEREAS by "The Weights and Measures Act, 1889," it is among other things enacted that the Board of Trade shall from time to time cause such new denominations of standards for the measurement of electricity as appear to them to be required for use in trade to be made and duly verified.

And whereas it has been made to appear to the Board of Trade that new denominations of standards are required for use in trade based upon the following units of electrical measurement, viz. :—

1. The Ohm, which has the value  $10^9$  in terms of the centimetre and the second of time and is represented by the resistance offered to an unvarying electric current by a column of mercury at the temperature of melting ice 14·4521 grammes in mass of a constant cross sectional area and of a length of 106·3 centimetres.

2. The Ampere, which has the value  $\frac{1}{10}$  in terms of the centimetre the gramme and the second of time and which is represented by the unvarying electric current which when passed through a solution of nitrate of silver in water in accordance with the specification appended hereto and marked A deposits silver at the rate of 0·001118 of a gramme per second.

3. The Volt, which has the value  $10^8$  in terms of the centimetre the gramme and the second of time being the electrical pressure that if steadily applied to a conductor whose resistance is one ohm will produce a current of one ampere, and which is represented by '8974 (~~1992~~) of the electrical pressure at a temperature of 15° C. between the poles of the voltaic cell known as Clark's cell set up in accordance with the specification appended hereto and marked B.

And whereas they have caused the said new denominations of standards to be made and duly verified.

Now, therefore, Her Majesty, by virtue of the power vested in Her by the said Act, by and with the advice of Her Privy Council, is pleased to approve the several denominations of standards set forth in the schedule hereto as new denominations of standards for electrical measurement.

## SCHEDULE.

## I.—STANDARD OF ELECTRICAL RESISTANCE.

A standard of electrical resistance denominated one Ohm being the resistance between the copper terminals of the instrument marked "Board of Trade Ohm Standard Verified 1894" to the passage of an unvarying electrical current when the coil of insulated wire forming part of the aforesaid instrument and connected to the aforesaid terminals is in all parts at a temperature of 15·4 C.

---

## II.—STANDARD OF ELECTRICAL CURRENT.

A standard of electrical current denominated one Ampere being the current which is passing in and through the coils of wire forming part of the instrument marked "Board of Trade Ampere Standard Verified 1894" when on reversing the current in the fixed coils the change in the forces acting upon the suspended coil in its sighted position is exactly balanced by the force exerted by gravity in Westminster upon the iridio-platinum weight marked A and forming part of the said instrument.

---

## III.—STANDARD OF ELECTRICAL PRESSURE.

A standard of electrical pressure denominated one Volt being one hundredth part of the pressure which when applied between the terminals forming part of the instrument marked "Board of Trade Volt Standard Verified 1894," causes that rotation of the suspended portion of the instrument which is exactly measured by the coincidence of the sighting wire with the image of the fiducial mark A before and after application of the pressure and with that of the fiducial mark B during the application of the pressure, these images being produced by the suspended mirror and observed by means of the eyepiece.

---

In the use of the above standards the limits of accuracy attainable are as follows :—

For the Ohm, within one hundredth part of one per cent.

For the Ampere, within one tenth part of one per cent.

For the Volt, within one tenth part of one per cent.

The coils and instruments referred to in this schedule are deposited at the Board of Trade Standardising Laboratory, 8, Richmond Terrace, Whitehall, London.

Order in  
Council.

## SPECIFICATIONS referred to in the foregoing Order in Council.

### SPECIFICATION A.

In the following specification the term silver voltameter means the arrangement of apparatus by means of which an electric current is passed through a solution of nitrate of silver in water. The silver voltameter measures the total electrical quantity which has passed during the time of the experiment, and by noting this time the time average of the current, or if the current has been kept constant, the current itself, can be deduced.

In employing the silver voltameter to measure currents of about 1 ampere the following arrangements should be adopted. The kathode on which the silver is to be deposited should take the form of a platinum bowl not less than 10 centimetres in diameter, and from 4 to 5 centimetres in depth.

The anode should be a plate of pure silver some 80 square centimetres in area and 2 or 3 millimetres in thickness.

This is supported horizontally in the liquid near the top of the solution by a platinum wire passed through holes in the plate at opposite corners. To prevent the disintegrated silver which is formed on the anode from falling on to the kathode, the anode should be wrapped round with pure filter paper, secured at the back with sealing wax.

The liquid should consist of a neutral solution of pure silver nitrate, containing about 15 parts by weight of the nitrate to 85 parts of water.

The resistance of the voltameter changes somewhat as the current passes. To prevent these changes having too great an effect on the current some resistance besides that of the voltameter should be inserted in the circuit. The total metallic resistance of the circuit should not be less than 10 ohms.

### *Method of making a Measurement.*

The platinum bowl is washed with nitric acid and distilled water, dried by heat, and then left to cool in a desiccator. When thoroughly dry it is weighed carefully.

It is nearly filled with the solution, and connected to the rest of the circuit by being placed on a clean copper support to which a binding screw is attached. This copper support must be insulated.

The anode is then immersed in the solution so as to be well covered by it and supported in that position; the connexions to the rest of the circuit are made.

Contact is made at the key, noting the time of contact. The current is allowed to pass for not less than half an hour, and the time at which contact is broken is observed. Care must be taken that the clock used is keeping correct time during this interval.

The solution is now removed from the bowl and the deposit is washed with distilled water and left to soak for at least six hours. It is then rinsed successively with distilled water and absolute alcohol and dried in a hot-air bath at a temperature of about 160° C. After cooling in a desiccator, it is weighed again. The gain in weight gives the silver deposited.

To find the current in amperes, this weight, expressed in grammes, must

be divided by the number of seconds during which the current has been passed, and by 0·001118.

The result will be the time-average of the current, if during the interval the current has varied.

In determining by this method the constant of an instrument the current should be kept as nearly constant as possible, and the readings of the instrument observed at frequent intervals of time. These observations give a curve from which the reading corresponding to the mean current (time-average of the current) can be found. The current, as calculated by the voltameter, corresponds to this reading.

Order in  
Council.  
—

---

#### SPECIFICATION B.

##### ON THE PREPARATION OF THE CLARK CELL.

###### *Definition of the Cell.*

The cell consists of zinc or an amalgam of zinc with mercury and of mercury in a neutral saturated solution of zinc sulphate and mercurous sulphate in water, prepared with mercurous sulphate in excess.

###### *Preparation of the Materials.*

1. *The Mercury.*—To secure purity it should be first treated with acid in the usual manner, and subsequently distilled in vacuo.

2. *The Zinc.*—Take a portion of a rod of pure redistilled zinc, solder to one end a piece of copper wire, clean the whole with glass paper or a steel burnisher, carefully removing any loose pieces of the zinc. Just before making up the cell dip the zinc into dilute sulphuric acid, wash with distilled water, and dry with a clean cloth or filter paper.

3. *The Mercurous Sulphate.*—Take mercurous sulphate, purchased as pure, mix with it a small quantity of pure mercury, and wash the whole thoroughly with cold distilled water by agitation in a bottle; drain off the water, and repeat the process at least twice. After the last washing, drain off as much of the water as possible.

4. *The Zinc Sulphate Solution.*—Prepare a neutral saturated solution of ("pure re-crystallized") zinc sulphate by mixing in a flask distilled water with nearly twice its weight of crystals of pure zinc sulphate, and adding zinc oxide in the proportion of about 2 per cent. by weight of the zinc sulphate crystals to neutralise any free acid. The crystals should be dissolved with the aid of gentle heat, but the temperature to which the solution is raised should not exceed 80° C. Mercurous sulphate treated as described in 3 should be added in the proportion of about 12 per cent. by weight of the zinc sulphate crystals to neutralise any free zinc oxide remaining, and the solution filtered, while still warm, into a stock bottle. Crystals should form as it cools.

5. *The Mercurous Sulphate and Zinc Sulphate Paste.*—Mix the washed mercurous sulphate with the zinc sulphate solution, adding sufficient crystals

**Order in Council.**  
—

of zinc sulphate from the stock bottle to ensure saturation, and a small quantity of pure mercury. Shake these up well together to form a paste of the consistence of cream. Heat the paste, but not above a temperature of 80° C. Keep the paste for an hour at this temperature, agitating it from time to time, then allow it to cool; continue to shake it occasionally while it is cooling. Crystals of zinc sulphate should then be distinctly visible, and should be distributed throughout the mass; if this is not the case add more crystals from the stock bottle, and repeat the whole process.

This method ensures the formation of a saturated solution of zinc and mercurous sulphates in water.

*To set up the Cell.*

The cell may conveniently be set up in a small test tube of about 2 centimetres diameter, and 4 or 5 centimetres deep. Place the mercury in the bottom of this tube, filling it to a depth of say .5 centimetres. Cut a cork about .5 centimetres thick to fit the tube; at one side of the cork bore a hole through which the zinc rod can pass tightly; at the other side bore another hole for the glass tube which covers the platinum wire; at the edge of the cork cut a nick through which the air can pass when the cork is pushed into the tube. Wash the cork thoroughly with warm water, and leave it to soak in water for some hours before use. Pass the zinc rod about 1 centimetre through the cork.

Contact is made with the mercury by means of a platinum wire about No. 22 gauge. This is protected from contact with the other materials of the cell by being sealed into a glass tube. The ends of the wire project from the ends of the tube; one end forms the terminal, the other end and a portion of the glass tube dip into the mercury.

Clean the glass tube and platinum wire carefully, then heat the exposed end of the platinum red hot, and insert it in the mercury in the test tube, taking care that the whole of the exposed platinum is covered.

Shake up the paste and introduce it without contact with the upper part of the walls of the test tube, filling the tube above the mercury to a depth of rather more than 1 centimetre.

Then insert the cork and zinc rod, passing the glass tube through the hole prepared for it. Push the cork gently down until its lower surface is nearly in contact with the liquid. The air will thus be nearly all expelled, and the cell should be left in this condition for at least twenty-four hours before sealing, which should be done as follows.

Melt some marine glue until it is fluid enough to pour by its own weight, and pour it into the test tube above the cork, using sufficient to cover completely the zinc and soldering. The glass tube containing the platinum wire should project some way above the top of the marine glue.

The cell may be sealed in a more permanent manner by coating the marine glue, when it is set, with a solution of sodium silicate, and leaving it to harden.

The cell thus set up may be mounted in any desirable manner. It is convenient to arrange the mounting so that the cell may be immersed in a water bath up to the level of, say, the upper surface of the cork. Its temperature can then be determined more accurately than is possible when the cell is in air.

In using the cell sudden variations of temperature should as far as possible be avoided.

The form of the vessel containing the cell may be varied. In the H form, the zinc is replaced by an amalgam of 10 parts by weight of zinc to 90 of mercury. The other materials should be prepared as already described. Contact is made with the amalgam in one leg of the cell, and with the mercury in the other, by means of platinum wires sealed through the glass.

---

Order in  
Council.

---

## BOARD OF TRADE ELECTRICAL STANDARDIZING LABORATORY.

1. The Board of Trade are now prepared to receive electrical instruments for examination or testing at their Electrical Standardizing Laboratory at 8, Richmond Terrace, Whitehall (v).

2. The only classes of electrical instruments which can be received at present for examination or testing are such as are intended for the measurement of electrical pressure, current, power, quantity, energy, or resistance.

3. Meters for the measurement of quantity or energy cannot be received with a view to certification for use in connection with the supply given by Undertakers under Electric Lighting Orders.

4. Instruments may be personally delivered at the Laboratory for testing between the hours of ten a.m. and two p.m., or may be forwarded by post or other delivery. In every case instruments must be accompanied by a form of application which may be obtained from the Laboratory.

5. The Board of Trade, or the officers of the Board, will not be responsible for any damage to any instrument, either in transport or while at the Laboratory, nor for any loss sustained in consequence of the time that may elapse before the instrument is returned.

6. Instruments will not be received which are not plainly marked with the name of the manufacturer and an identification number.

7. Instruments will not be returned until all money due for fees or other charges incurred has been paid.

8. Every instrument submitted must be provided with suitable terminals or leads, so that it can be readily connected to the testing circuit without soldering.

9. All indicating instruments must have their dials plainly marked with a suitable scale, which may be of equal or of unequal divisions.

10. The points of testing required must be specified in electrical units (volts, amperes, etc.), stating whether alternating or continuous or both, and not in numbers referring to the scale on the instrument.

---

(v) Application for examination or testing of electrical instruments at the Board of Trade Electrical Standardizing Laboratory must be made on a printed form provided by the Board of Trade for the purpose. Other forms are provided in connection with the examination or testing ; and these are procurable at the Board of Trade.



11. The Laboratory charges on any instrument may be paid by Post Office Order or Postal Order if the instrument is to be forwarded by post or other delivery, or in cash by the person authorized to remove the instrument. All payments should be made to the Assistant-Secretary, Finance Department, Board of Trade, Whitehall Gardens, S.W.

12. A certificate of test will be forwarded by post after the instrument has been removed.

13. The attached scale of fees for examination or testing of electrical instruments for the measurement of resistance, current, or electrical pressure, has been approved by the Treasury under Section 8 of "The Weights and Measures Act, 1899."

T. H. W. PELHAM,  
Assistant-Secretary, Board of Trade.

October 7, 1897.

## BOARD OF TRADE ELECTRICAL STANDARDIZING LABORATORY.

### TABLE OF FEES FOR EXAMINATION OR TESTING OF ELECTRICAL INSTRUMENTS FOR THE MEASUREMENT OF RESISTANCE, CURRENT, OR ELECTRICAL PRESSURE.

	£	s.	d.
1. For an instrument intended to be used as a sub-standard and submitted for special examination and testing .. .. .	8	0	0
If required to be kept under observation for a period longer than one month ; for each additional month or part of a month ..	1	0	0
2. For ordinary direct reading instruments : for testing at three points :			
Voltmeter for continuous pressure only :—			
Not exceeding 200 volts .. .. .	0	5	0
Exceeding 200 and not exceeding 500 volts .. .. .	0	6	0
Exceeding 500 and not exceeding 2,000 volts .. .. .	0	7	6
Voltmeter for alternating pressure only :—			
Exceeding 20 and not exceeding 2,000 volts .. .. .	0	7	6
Exceeding 2,000 and not exceeding 10,000 volts .. .. .	0	10	0
Extra fee if tests are to be made at one stated frequency of alternation .. .. .	0	2	0
Voltmeter for both continuous and alternating pressures, or for alternating at two frequencies :			
Exceeding 20 and not exceeding 2,000 volts .. .. .	0	10	0
Ammeter for continuous current only :—			
Not exceeding 200 amperes .. .. .	0	5	0
Exceeding 200 and not exceeding 500 amperes .. .. .	0	7	6
Exceeding 500 and not exceeding 1,000 amperes .. .. .	0	10	0
Exceeding 1,000 and not exceeding 2,500 amperes .. .. .	0	15	0
Ammeter for alternating current only :—			
Not exceeding 500 amperes .. .. .	0	7	6
Extra fee if tests are to be made at one stated frequency of alternation .. .. .	0	2	0

Table of  
Fees.

	£	s.	d.
2. For ordinary direct-reading instruments, etc.— <i>continued</i> .			
Ammeter for both continuous and alternating currents :—			
Not exceeding 500 amperes .. .. .	0	10	0
Watt-meter—continuous current—for testing at three points :—			
Not exceeding 200 volts or 200 amperes .. .. .	0	12	0
Exceeding these limits up to 2,000 volts, or 2,500 amperes ..	0	15	0
Watt-meter—alternating current—for testing at three points :—			
Not exceeding 10,000 volts or 1,000 amperes .. .. .	1	0	0
For each point tested beyond three points in any direct-reading instrument an addition of 20 per cent. will be made to the amount of fee.			
In the case of any direct-reading instrument if arranged to record, and if the accuracy of such record is required to be verified :			
Extra fee for every record verified .. .. .	0	2	6
8. For instruments reading by an adjustment to zero, an increase of 50 per cent. on the fees for similar direct-reading instruments will be charged.			
4. For determining the constants of integrating meters ( <i>w</i> ) at three rates within their range of measurement :—			
Quantity meter, continuous current only :—			
Up to a maximum rate of 25 amperes .. .. .	0	10	0
Up to a maximum rate exceeding 25 and not exceeding 100 amperes .. .. .	0	15	0
Up to a maximum rate exceeding 100 and not exceeding 500 amperes .. .. .	1	0	0
Up to a maximum rate exceeding 500 and not exceeding 2,000 amperes .. .. .	1	10	0
Quantity meter, alternating current :—			
Up to a maximum rate of 25 amperes :—			
If to be tested at one frequency of alternation .. .. .	0	10	0
If to be tested at two frequencies, or at one frequency of alternation, and with continuous current .. .. .	0	15	0
Up to a maximum rate exceeding 25 and not exceeding 100 amperes :—			
If to be tested at one frequency .. .. .	0	15	0
If to be tested at two frequencies, or at one frequency of alternation, and with continuous current .. .. .	1	2	6
Up to a maximum rate exceeding 100 and not exceeding 500 amperes :—			
If to be tested at one frequency .. .. .	1	0	0
If to be tested at two frequencies, or at one frequency of alternation, and with continuous current .. .. .	1	10	0
Energy meter, continuous current only :—			
Up to a maximum rate of 10,000 watts .. .. .	0	15	0
Up to a maximum rate exceeding 10,000 and not exceeding 50,000 watts .. .. .	1	0	0

(*w*) These instruments will only be accepted for testing if intended to be used as sub-standards or for scientific purposes. ..

	£	s.	d.	Table of Fees.
4. For determining the constants, etc.— <i>continued</i> .				
Energy meter, continuous current only— <i>continued</i> .				
Up to a maximum rate exceeding 50,000 and not exceeding 200,000 watts .. .. .	1	10	0	
Energy meter, alternating current (x):—				
Up to a maximum rate of 20,000 watts:—				
If to be tested at one frequency .. .. .	1	0	0	
If to be tested at two frequencies, or at one frequency of alternation, and with continuous current .. .. .	1	10	0	
Up to a maximum rate exceeding 20,000 watts and not exceeding 100,000 watts:—				
If to be tested at one frequency .. .. .	1	10	0	
If to be tested at two frequencies, or at one frequency of alternation, and with continuous current .. .. .	2	5	0	
For each rate tested beyond three rates in any meter an addition of 20 per cent. will be made to the amount of fee.				
5. For testing resistances and standard cells:—				
For a resistance coil of not less than 1 ohm resistance to an accuracy of 0·01 per cent. .. .. .	0	5	0	
For a resistance coil of resistance between 1 ohm and 100 ohm to an accuracy of 0·1 per cent. .. .. .	0	5	0	
For a box of resistance coils with Wheatstone bridge, Post Office or dial pattern, to an accuracy of 0·1 per cent., per coil tested .. .. .	0	0	6	
With a minimum fee of .. .. .	0	2	6	
For a coil of standard form to highest accuracy obtainable at one temperature .. .. .	0	10	0	
For determining the E.M.F. of a Clark's standard cell at one temperature .. .. .	0	5	0	
For testing resistances and standard cells at two different and determined temperatures the fee to be charged will be twice that specified above, with an additional charge of 5s. for each instrument.				

In the case of all the above-mentioned tests, except tests of standard instruments, integrating meters, and resistances, the fees charged will be reduced by one-third if from six to twelve similar instruments are submitted at the same time, and by one-half if the number exceeds twelve.

---

CONDITIONS UNDER WHICH INSTRUMENTS ARE RECEIVED FOR EXAMINATION OR TESTING AT THE BOARD OF TRADE ELECTRICAL STANDARDIZING LABORATORY.

1. The only class of electrical instruments which can be received at present for examination or testing are such as are intended for the measurement of electrical pressure, current, power, quantity, energy, or resistance.

2. Meters for the measurement of quantity or energy cannot be received with a view to certification for use in connection with the supply given by undertakers under Electric Lighting Orders.

---

(x) No greater alternating current than 500 amperes can be measured.

3. The Board of Trade, or the Officers of the Board, will not be responsible for any damage of any instrument, either in transport or while at the laboratory, nor for any loss sustained in consequence of the time that may elapse before the instrument is returned.

4. Instruments will not be received which are not plainly marked with the name of the manufacturer and an identification number.

5. Instruments will not be returned until all money due for fees or other charges incurred has been paid.

6. Every instrument submitted must be provided with suitable terminals or leads, so that it can be readily connected to the testing circuit without soldering.

7. All indicating instruments must have their dials plainly marked with a suitable scale, which may be of equal or unequal divisions.

8. The points of testing required must be specified in electrical units (volts, amperes, etc.), stating whether alternating or continuous or both, and not in numbers referring to the scale on the instrument.

---

## COUNTY OF LONDON.

	PAGE.
I.—POINTS IN WHICH A COUNTY OF LONDON PROVISIONAL ORDER DIFFERS FROM OTHER PROVISIONAL ORDERS.....	308
II.—COMPETITION AND OVERLAPPING IN THE COUNTY OF LONDON....	306
III.—ESTABLISHMENT OF TESTING STATIONS BY THE LONDON COUNTY COUNCIL .....	812
Rules made .....	812
IV.—PROTECTION OF THEATRES, ETC., FROM FIRE .....	815
Act giving authority .....	815
Regulations .....	816
V.—LONDON OVERHEAD WIRES.....	825
Act .....	825
Regulations .....	832
VI.—ELECTRIC LIGHTING (LONDON) BILL OF SESSIONS 1901 and 1902 AS TO BOUNDARIES .....	884
Board of Trade Circular relative thereto .....	884

---

(I.).—POINTS IN WHICH A COUNTY OF LONDON PROVISIONAL ORDER  
DIFFERS FROM OTHER PROVISIONAL ORDERS.

By section 2 (2) of the Electric Lighting (Clauses) Act, 1899, it is provided that the Electric Lighting (Clauses) Act, 1899, shall not apply to the county of London. While therefore as regards the provinces a short form of Provisional Order (see p. 231) is now practicable, in the county of London the old long form is still used. This is illustrated by the Act 1 Edw. 7, ch. clxxviii., which confirms two Provisional Orders; the one in the long form for Lewisham, which is within the administrative county of London, and the other in the short form for Penge, which is in the county of Kent. The undertakers in the two orders were identical.

County of London Orders contain a clause to the effect that where undertakers desire to lay, or may be required to lay any electric line in any street, under the surface of which there is a subway vested in the County Council, the County Council may require the undertakers to lay such line in the subway upon terms to be settled by agreement or arbitration. Subways.

Saving for  
embankment,  
park, or open  
space of  
County  
Council.

In County of London Orders, a clause is inserted to the effect that nothing in the Order shall authorise the undertakers to break up or otherwise interfere with any embankment, park, or open space for the time being vested in the County Council except so far as any part of such embankment, park, or open space forms part of a street, or to interfere with or make use of any tunnel, sewer, or subway so vested except with the consent in writing of the County Council and subject to such terms and conditions as they may impose.

Saving for  
River  
Thames.

A clause is further inserted to the effect that nothing in this Order shall authorise the undertakers to interfere in any manner with the bed or soil or with the banks or shores of the River Thames below the level of ordinary tides or with the navigation thereof, or affect in any manner the rights, powers or privileges of the Conservators of the River Thames.

Purchase.

Heretofore it has been the practice, in County of London Provisional Orders, to provide that the forty-two years fixed by the purchase clause (section 2) of the Act of 1888 shall run from one fixed date, viz., August 26th, 1889. See note, p. 147. The report of the Joint Committee of 1898, presided over by Lord Cross (see *ante*, p. 60) states that—

“In connection with this question of purchase under section 2 of the Act of 1888, evidence has been given to the effect that with a view to secure in London one and the same time for the execution of the powers, the Board of Trade have in some cases imposed upon undertakers a less term than forty-two years within which they are liable to be purchased.

“The Committee suggest that if the full period of forty-two years is not granted, and if a substantially shorter period is imposed by the Board of Trade, the terms of purchase should in each case be reconsidered.”

---

The following variations on the Schedule to the Electric Lighting (Clauses) Act, 1899, would be necessary to fit it to the circumstances of the County of London :—

Section 9. Incorporation of section 265 of the Public Health Act, 1875.

*Substitute section 124 of the Public Health (London) Act, 1891.*

Section 10 (b) relating to electric lines above ground.

*Provide for the express consent of the County Council as well as of the Board of Trade.*

Section 14 (2), as to notice of works, with plan to be served on Postmaster-General and local authority.

*A like notice and plan should be served on the County Council; and the other provisions should be made to apply mutatis mutandis as in the case of the Postmaster-General, where any street or public bridge is repairable by the County Council.*

Section 16. Street authority may give notice of desire to break up streets, etc., on behalf of undertakers.

*This section should be made applicable in the case of any body or person liable to repair any sewer, subway, or work connected therewith.*

Section 17. Alteration of pipes, wires, etc., under streets.

*Provision should be made for protecting the sewers of the County Council; and under sub-section (j) the County Council should be exempted from the obligation to give security.*

Section 18. Laying of electric lines, etc., near sewers, etc.

*Substitute the London County Council for the local authority throughout this section. The period of notice should be fourteen days instead of three days.*

Section 23. Failure of undertakers to lay down mains, etc.

*Representations to the Board of Trade may be made by the County Council.*

Section 24. Requisition.

*Substitute "two or more" for "six or more" owners or occupiers.*

Section 25. Provisions on requisition by owners or occupiers.

*Substitute the period of two years for three years.*

Section 31. Methods of charging.

*Make provision for service of notice on the County Council.*

Section 35. Appointment of electric inspector.

*In County of London Orders, the County Council appoint, and, in the event of their failure, etc., the Board of Trade.*

Section 36. Duties of electric inspector.

*Substitute the County Council for the local authority.*

Section 37. Remuneration of electric inspector.

*Substitute the County Council for the local authority.*

Section 41. Establishment of testing stations.

*Provision should be made for the establishment of testing stations by the London County Council.*

**Section 57. Differences as to correctness of meter.**

*Where the London County Council are consumers such differences are settled by an inspector appointed by the Board of Trade.*

**Section 60. Map of area of supply.**

*Put the County Council in the same position as the Board of Trade or the Postmaster-General under this section.*

**Section 70. Publication of regulations.**

*A copy of the regulations should be served on the County Council.*

**Section 75. Extension of time, etc.**

*Substitute the London County Council for the local authority.*

**Section 76. Recovery and application of penalties.**

*Substitute the London County Council for the local authority, and make provision to the effect that, save as in the section provided, all penalties recovered summarily under the Order shall be applied according to the law regulating the application of penalties so recovered within the Metropolitan Police district.*

**II. COMPETITION AND OVERLAPPING IN THE COUNTY OF LONDON.**

Section 1 of the Electric Lighting Act, 1888, contains the following :—

“The grant of authority to any undertakers to supply electricity within any area, whether granted by licence or by means of a provisional order, shall not in any way hinder or restrict the granting of a licence or provisional order to the local authority or to any other company or person within the same area.”

A few instances of such competition having been authorised within the Metropolitan area may here be given :—

In the parish of St. Martin's the following companies are authorised to supply electricity: The Charing Cross and Strand Electricity Supply Corporation, London Electric Supply Corporation, and Metropolitan Electric Supply Co.

In the City of London the Charing Cross and Strand and the City of London Electric Supply Companies; in the districts of Holborn and St. Giles the Charing Cross and Strand and the Metropolitan Electric Supply Co.

In 1900 the local authorities of Mile End Old Town, Limehouse, and St. George's-in-the-East respectively applied for provisional orders. The County of London and Brush Provincial Electric Lighting Co. had obtained a provisional order for these districts in



1897, but had not begun to supply those districts. They opposed the granting of provisional orders, which, however, were made by the Board of Trade, and were afterwards confirmed. In 1899 the Bermondsey Vestry obtained a provisional order, which was duly confirmed, notwithstanding the opposition of the London Electric Supply Corporation, who had power to supply electricity within the district. As to Bermondsey, see further, *ante*, pp. 12 and 78. In 1900 the County of London and Brush Provincial Electric Lighting Co. obtained a provisional order for Battersea, Battersea Vestry having obtained a provisional order in 1896. The Board of Trade have refused to make provisional orders in several instances where the proposed area of supply is already being served by one or more authorised undertakers. See *e.g.*, the cases of Bermondsey and Southwark respectively, referred to in the Report of the Board of Trade under the Electric Lighting Acts, 1882 to 1890, for 1902 (Parliamentary Paper No. 280, p. 8). All the instances of overlapping down to the end of the Session of 1897 are contained in the following table, prepared and put in by Sir Alexander R. Binnie (then chief engineer to the London County Council) before the Joint Select Committee of the House of Lords and House of Commons on Electrical Energy (Generating Stations and Supply), Parliamentary Paper No. 213 of 1898, at p. 156.

---

TABLE C., PUT IN BY SIR ALEXANDER RICHARDSON BINNIE.

TABLE SHOWING OVERLAPPING ORDERS IN LONDON.

Parish.	Orders.
BATTERSEA . . . .	Battersea Vestry, 1896.
BERMONDSEY . . . .	London Electric Supply Corporation, 1889.
BETHNAL GREEN . . . .	Nil.
CAMBERWELL . . . .	Over-lapping { London Electric Supply Corporation, 1890 (part). County of London and Brush Provincial, 1896 (part). Crystal Palace District Electric Supply Company, 1890 and 1894.
CHelsea . . . .	Over-lapping { Chelsea Electric Supply Company, 1886. London Electric Supply Corporation, 1889.
CLERKENWELL . . . .	Over-lapping { London Electric Supply Corporation, 1889. County of London and Brush Provincial, 1892.
FULHAM . . . .	Fulham Vestry, 1897.
HACKNEY . . . .	Hackney District Board, 1893.
HAMMERSMITH . . . .	Hammersmith Vestry, 1893.
HAMPSTEAD . . . .	Hampstead Vestry, 1892.
ISLINGTON . . . .	Islington Vestry, 1893.
KENSINGTON . . . .	Not over-lapping { Kensington and Knightsbridge Electric Lighting Company, 1889. Notting Hill Electric Lighting Company, 1889 and 1895. House to House Electric Light Company, 1889.
LAMBETH . . . .	Part over-lapping { Lambeth Vestry, 1892, transferred to South London Electric Supply Corporation, 1897. London Electric Supply Corporation, 1889. Crystal Palace District Electric Supply Company, 1890 and 1894.
MARYLEBONE . . . .	Metropolitan Electric Supply Company, 1889.
MILE END . . . .	County of London and Brush Provincial, 1897.
NEWINGTON . . . .	Over-lapping { London Electric Supply Corporation, 1889. Newington Vestry, 1897.
PADDINGTON . . . .	Metropolitan Electric Supply Company, 1889.
ROTHERHITHE . . . .	London Electric Supply Corporation, 1889.
ST. GEORGE-IN-THE-EAST . . . .	County of London and Brush Provincial, 1897.
ST. GEORGE'S, HANOVER SQUARE . . . .	Over-lapping { Westminster Electric Supply Company, 1889. London Electric Supply Corporation, 1889.
ST. GEORGE - THE - MARTYR, SOUTHWARK . . . .	Over-lapping { London Electric Supply Corporation, 1890. County of London and Brush Provincial, 1892.
ST. JAMES', WESTMINSTER . . . .	Over-lapping { London Electric Supply Corporation, 1889. St. James' and Pall Mall Electric Supply Company, 1890.
ST. LUKE, MIDDLESEX . . . .	County of London and Brush Provincial Electric Lighting Company, 1892.

TABLE SHOWING OVERLAPPING ORDERS IN LONDON—*continued*.

Parish.	Orders.
ST. MARTIN-IN-THE-FIELDS	Over-lapping { Charing Cross and Strand Electric Lighting Company, 1889. London Electric Supply Corporation, 1889. Metropolitan Electric Supply Company, 1889.
ST. PANCRAE . . . .	St. Pancras Vestry, 1883.
SHOREDITCH . . . .	Shoreditch Vestry, 1892.
STOKE NEWINGTON . . . .	Hackney District Board, 1893.
WESTMINSTER (ST. MARGARET AND ST. JOHN) . . . .	Over-lapping { Kensington and Knightsbridge Electric Lighting Company, 1889 and 1891. Westminster Electric Supply Company, 1889. London Electric Supply Corporation, 1897.
WOOLWICH . . . . .	Woolwich District Electric Lighting Company, 1891.
GREENWICH . . . . .	Part over-lapping { London Electric Supply Corporation, 1889. Blackheath and Greenwich District Electric Lighting Company, 1897.
HOLBORN . . . . .	Part over-lapping { Metropolitan Electric Supply Company, 1889. County of London and Brush Provincial, 1897.
LEWISHAM (part) . . . .	Not over-lapping { Crystal Palace District Electric Supply Company, 1890 and 1894. Blackheath and Greenwich District Electric Lighting Company, 1897.
LIMEHOUSE . . . . .	County of London and Brush Provincial, 1897.
PLUMSTEAD . . . . .	Nil.
POPLAR . . . . .	Poplar District Board, 1893.
St. GILES DISTRICT . . . .	Metropolitan Electric Supply Company, 1889.
ST. OLAVE, SOUTHWARK . .	Over-lapping { London Electric Supply Corporation, 1889. County of London and Brush Provincial Electric Lighting Company, 1895.
St. SAVIOUR'S . . . . .	Part over-lapping { London Electric Supply Corporation, 1889. City of London Electric Lighting Company Southwark Order. County of London and Brush Provincial Electric Lighting Company, 1896.
STRAND . . . . .	Over-lapping { Metropolitan Electric Supply Company, 1889. Charing Cross and Strand Corporation, 1895.
WANDSWORTH . . . . .	County of London and Brush Provincial, 1892.
WHITECHAPEL . . . . .	Whitechapel District Board, 1892.

The following table, extending to a later date, is taken from *London Statistics* for 1900—1901, prepared by the London County Council, being their publication No. 591, at pp. lxxiii.—lxxiv. :—

Areas of supply.

“The following table gives a list of the sanitary districts of London, and shows for each district whether the local authority or what companies possess statutory powers for supplying electricity therein :—

Sanitary districts.	Local authority or company possessing statutory powers to supply electricity.
CITY OF LONDON .	City of London Company. Charing Cross and Strand Corporation.
INNER TEMPLE . .	City of London Company. Charing Cross and Strand Corporation.
MIDDLE TEMPLE . .	City of London Company. Charing Cross and Strand Corporation.
CITY OF WESTMINSTER	Charing Cross and Strand Corporation (whole except St. George, Hanover Square; St. James', Westminster; St. Margaret and St. John; and St. Peter). Kensington and Knightsbridge Company (detached part of St. Margaret and St. John). London Supply Corporation (St. George, Hanover Square; St. James', Westminster; main part of St. Margaret and St. John; and western part of St. Martin-in-the-Fields). Metropolitan Company (Rolls; St. Anne, Westminster; St. Clement Danes; eastern part of St. Martin-in-the-Fields); St. Mary-le-Strand; St. Paul, Covent Garden; and Savoy). St. James' and Pall Mall Company (St. James', Westminster). Westminster Supply Corporation (St. George, Hanover Square; and main part of St. Margaret and St. John).
BATTERSEA . . .	Battersea Borough Council.
BERMONDSEY . . .	Bermondsey Borough Council (Bermondsey parish only). County of London Company (Horselydown; and St. Olave and St. Thomas). London Supply Corporation.
BETHNAL GREEN	Bethnal Green Borough Council.
CAMBERWELL . . .	County of London Company (whole except small part in south). Crystal Palace Company (small part in south). London Supply Corporation (northern part).
CHELSEA . . . . .	Chelsea Company. London Supply Corporation.
DEPTFORD . . . . .	London Supply Corporation.
FINSBURY . . . . .	County of London Company. London Supply Corporation (Clerkenwell only). Metropolitan Company (Glasshouse Yard; and St. Sepulchre).
FULHAM . . . . .	Fulham Borough Council.
GREENWICH . . . .	Blackheath and Greenwich Company (whole except St. Nicholas, Deptford). London Supply Corporation (whole except Charlton and Kidbrook).
HACKNEY . . . . .	Hackney Borough Council.
HAMMERSMITH . . .	Hammersmith Borough Council.
HAMPSTEAD . . . .	Hampstead Borough Council.
HOLBORN . . . . .	Charing Cross and Strand Corporation (small part in south of St. Andrew and St. George; and southern part of St. Giles and St. George). County of London Company (whole except Lincoln's Inn; small part in south of St. Andrew and St. George; southern part of St. Giles and St. George; and Staple Inn). Metropolitan Company (Saffron Hill; St. Andrew and St. George; and St. Giles and St. George).

Sanitary districts.	Local authority or company possessing statutory powers to supply electricity.
ISLINGTON . . .	Islington Borough Council.
KENSINGTON . . .	Brompton and Kensington Company (southern part). Kensington and Knightsbridge Company (south-eastern part). Notting Hill Company (middle and northern parts).
LAMBETH . . .	County of London Company (Streatham detached portion). Crystal Palace Company (small part in south). London Supply Corporation (small part in north). South London Supply Corporation (rest of borough).
LEWISHAM . . .	Blackheath and Greenwich Company (Lee; and small part in north-east of Lewisham parish). Crystal Palace Company (small part in south-west). Lewisham and District Company (whole of Lewisham parish except small parts in north-east and south-west).
PADDINGTON . . .	Metropolitan Company (whole except Chelsea detached portion).
POPLAR . . .	Poplar Borough Council.
ST. MARYLEBONE . . .	Metropolitan Company.
ST. PANCRAS . . .	St. Pancras Borough Council.
SHOREDITCH . . .	Shoreditch Borough Council.
SOUTHWARK . . .	Southwark Borough Council (Newington only). City of London Company (Christchurch; and St. Saviour). County of London Company (St. George-the-Martyr; and small part in east of St. Saviour). London Supply Corporation.
STEPNEY . . .	Stepney Borough Council. County of London Company (Limehouse; Mile End Old-Town; Ratcliff; St. George-in-the-East; Shadwell; and Wapping).
STOKE NEWINGTON . . .	Stoke Newington Borough Council (whole except South Hornsey portion).
WANDSWORTH . . .	County of London Company.
WOOLWICH . . .	Woolwich Borough Council (Plumstead only). Blackheath and Greenwich Company (Eltham only). Woolwich Company (part of Woolwich parish south of Thames).

"The above table is correct in detail only if the Electric Lighting (London) Bill, 1902, becomes law. This proposes to adjust the areas of supply so as to conform, as far as practicable, to the new parish boundaries settled under the London Government Act.

"The operations of the above-named companies, with the exception of the Crystal Palace District Electric Supply Company, are confined to the Administrative County of London; the Crystal Palace Company, in addition to supplying portions of Camberwell, Lambeth, and Lewisham boroughs, supplies current to portions of Beckenham and Penge urban districts." *London Statistics*, 1900—1901, p. lxxiii.—lxxiv.

It appears from the same volume of statistics that in addition to the companies above stated, all of which possess statutory powers, there are two companies not having statutory powers which supply current, viz., the North-West London Electric Supply Company, operating in Hampstead, and supplying current

Non-statutory companies in London.

by means of overhead wires ; and the Smithfield Markets Electric Supply Company, which supplies electric light to the Corporation Markets at West Smithfield under a concession for twenty-one years granted in 1892 by the City Corporation (p. lxxiii.).

### III.—ESTABLISHMENT OF TESTING STATIONS BY THE LONDON COUNTY COUNCIL.

In Provisional Orders for the supply of electricity within the County of London, the County Council are the authority empowered to appoint an electric inspector, and in the event of their failure, the Board of Trade appoints. Provision is made in such Orders for the establishment of testing stations by the London County Council ; and, where the London County Council are consumers, differences as to the correctness of meters are to be settled by an inspector appointed by the Board of Trade. The powers of the London County Council in this respect are analogous to those conferred upon local authorities by ss. 35—37 of the Schedule to the Electric Lighting (Clauses) Act, 1899.

Under the powers so conferred upon them the London County Council have, with the approval of the Board of Trade, made the following rules as to testing electricity meters, etc. :—

#### LONDON COUNTY COUNCIL.

##### ELECTRIC LIGHTING ACTS AND ORDERS.

*Rules as to testing Electricity Meters, &c., and Scales of Fees prescribed by the London County Council on 29th March, 1898, and approved by the Board of Trade on 17th June following.*

##### *Meters in use upon a consumer's premises.*

(1) Upon any application being received by the Council in connection with any difference arising between any consumer and the undertakers as to the accuracy of any meter, an appointment will be made with the consumer and the undertakers for an inspector to attend at the premises of the consumer. The inspector will take charge of the meter, which is not to be disconnected from the circuit except in his presence, and then only by the undertakers.

(2) The inspector will, as far as possible, ascertain before such disconnection takes place whether the meter is properly fixed and connected with the circuit, and whether it appears to be in good working order.

(3) If the meter be not one requiring to be tested for synchronism, it will then be removed under the supervision of the inspector to the Council's office, 42, Cranbourne Street, to be there tested for accuracy.

(4) If the meter be of a type requiring to be tested for synchronism, it will, if necessary after disconnection from the circuit, and before removal from its position, be sealed up by the inspector and run for at least 24 hours

without current being allowed to pass through the main coils, and at the end of that time or of such longer time as may be convenient, the result will be ascertained by the inspector and the meter then removed in the manner before indicated.

(5) Before removing the meter, the inspector will ascertain as accurately as possible the total current which may be taken if all the current-consuming devices connected with the installation are put on to the circuit, and also the average and the maximum normal current.

(6) If the inspector considers it desirable, he will also, with the concurrence of the applicant and upon payment of the prescribed fee, test the insulation resistance of the meter as fixed, and of the house installation connected therewith.

(7) In the case of meters which can, under certain circumstances, register without current passing through the main coils, the inspector will make a careful examination to ascertain whether such registration is effected.

(8) The tests for accuracy will be made at the Council's meter-testing station, 42, Cranbourne Street.

(9) In the case of meters which before being fixed shall have been tested by the Council and passed as correct meters, the meters will be tested for starting current and at one or more quarter loads, and if the results be approximately the same as those obtained in the previous tests the meters will be considered correct. (A meter shall be considered to be "correct" when the registration shown by the dials is within  $2\frac{1}{2}$  per cent. of absolute accuracy at all points above one-twentieth load.)

(10) In the case of meters which have not been tested and sealed by the Council before fixing, the tests will be made at the average load used by the consumer, if this can be ascertained.

(11) In cases where the meter has been removed from the consumer's premises before any application for testing is made to the Council, it may nevertheless be tested for accuracy, but a note will be attached to the report stating that the meter was removed from the consumer's premises before it was tested, and that the Council has no means of ascertaining whether its condition is the same as it was when so fixed.

(12) At least one test will be made of every meter by a dial reading, and the dial works will be further examined to ascertain that the gearing is properly proportioned.

(13) The report of the inspector, or a copy thereof, will be sent both to the consumer and to the undertakers by the engineer in charge of the Council's meter-testing station.

(14) All fees for testing shall, unless the Council otherwise order, be paid in advance by the applicant to the cashier of the Council at its office in Spring Gardens.

(15) Within one week after the completion of the test the meter will be handed at Cranbourne Street to the representative of the owner, unless circumstances shall have arisen which render a further test desirable.

(16) For all meters of a pattern approved by the Board of Trade, any recommendations made by that Board with regard to testing will be followed as far as circumstances admit.

## SCALE OF FEES FOR TESTING ELECTRICITY METERS, &amp;c.

*Single or disputed meters*

used or to be used in any district for which the Council is the statutory authority).

For testing a single meter of any description				s.	d.
			up to 50 ampères capacity	10	0
Do.	do.	do.	of capacity from 50 to 100 ampères	20	0
Do.	do.	do.	of capacity from 100 to 200 ampères	25	0
Do.	do.	do.	of capacity from 200 to 400 ampères	30	0

For testing each "disputed" meter the charge shall be as above, and no reduction shall be made if a number of disputed meters be sent in together.

*Batches of meters.*

For testing meters, delivered at and removed from the testing-station free of cost to the Council, any work necessary for adjusting inaccurate or defective meters being charged for extra—

CLASS 1.—Meters without shunt coils and not requiring to be fixed for testing, up to 50 ampères capacity, if sent in in batches of not fewer than 10 of the same size and make, each				s.	d.
				6	6
Do.	do.	do.	from 50 to 100 ampères capacity, each	9	0
Do.	do.	do.	from 100 to 200 ampères capacity, each	12	0
CLASS 2.—Meters with shunt coils or requiring to be fixed for testing, up to 50 ampères capacity, if sent in in batches of not less than 10 of the same size and make, each				7	0
Do.	do.	do.	from 50 to 100 ampères capacity, each	10	0
Do.	do.	do.	from 100 to 200 ampères capacity, each	13	0
CLASS 3.—Meters requiring fixing and synchronising, or adjusting after fixing, up to 50 ampères capacity, if sent in in batches of not less than 10 of the same size and make, each				8	0
Do.	do.	do.	from 50 to 100 ampères capacity, each	12	0
Do.	do.	do.	from 100 to 200 ampères capacity, each	17	6

CLASS 4.—Meters for multiple circuits will be charged for according to the number of circuits.

CLASS 5.—Meters which require to be tested on a circuit absorbing considerable power will be charged for at special rates.

*A reduction of 10 per cent. from these prices to be allowed when 20, and of 25 per cent. when 50, meters of the same make and capacity are sent in at the same time.*

Partial re-tests made on any meter after adjustment will be charged, according to amount of work involved, at one-fourth to one-half of the fee charged for "single or disputed" meters of the same capacity.



*Inspection in situ.* s. d.

For examining in position after fixing, and certifying if found correct, any single meter (which has already been tested for accuracy at the Council's testing-station) within a radius of three miles from Cranbourne Street .. .. 2 6

Do. do. do. any distance from three to six miles 8 6

For examining in position after fixing, where a number of meters in the same district, and within a reasonable distance of each other can be inspected on the same day, 1*l.* for the services of the inspector for the entire day, or 15*s.* for half a day. A further charge of 6*d.* will be made for each certificate.

*Electric pressure.* s. d.

For taking a record of "pressure" at any consumer's house within three miles of the testing-station, such record extending over 24 hours .. .. 10 6

If such record extends over two or more consecutive periods of 24 hours, for each succeeding period .. .. 5 0

*Service lines.*

For testing a single pair of service lines .. .. 10 0

In difficult cases (in addition to the fee of 10*s.*), for every hour or part of an hour occupied after the first two hours .. .. 5 0

For testing any installation for insulation resistance to earth, where the time occupied is less than two hours .. .. 10 0

For every hour or part of an hour after the first two hours .. 5 0

NOTE.—*The above fees are to include omnibus fare for the inspector and assistant, but all other travelling expenses and cost of carriage of meters etc. (if any), to be charged in addition.*

Sealed by order,

C. J. STEWART,

*Clerk of the Council.*



Approved by the Board of Trade,

T. H. W. PELHAM,

*Assistant Secretary, Board of Trade.*

17th June, 1898.

NOTE.—*All communications with regard to the matters above referred to should be addressed to the Engineer-in-charge, London County Council Testing-station, No. 42, Cranbourne Street, W.C.*

## IV.—PROTECTION OF THEATRES, ETC., FROM FIRE.

By the Metropolis Management and Building Acts Amendment Act, 1878 (41 & 42 Vict. ch. 82), it is provided by s. 12 that—

"The Board may from time to time make, alter, vary, and amend such regulations as they may think expedient with respect to the requirements for the protection from fire of houses or other places

Power to Board to make regulations with

respect to  
new theatres  
and certain  
new music  
halls for  
protection  
from fire.

of public resort within the Metropolis to be kept open for the public performance of stage plays, and of houses, rooms, or other places of public resort within the Metropolis containing a superficial area for the accommodation of the public of not less than five hundred square feet, to be kept open for public dancing, music, or other public entertainment of the like kind, under the authority of letters patent from Her Majesty, her heirs or successors, or of licenses by the Lord Chamberlain of Her Majesty's Household, or by any justices of the peace, or by any court of quarter sessions, which may be granted for the first time after the passing of this Act; and may by such regulations prescribe the requirements as to position and structure of such houses, rooms, or places of public resort which may, in the opinion of the Board, be necessary for the protection of all persons who may frequent the same against dangers from fires which may arise therein or in the neighbourhood thereof; provided that the Board may from time to time in any special case dispense with or modify such regulations, or may annex thereto conditions if they think it necessary or expedient so to do.

\* . . . . \*

Under the powers of the above Act the London County Council, coming in the place of the Metropolitan Board of Works, under s. 40 (8) of the Local Government Act, 1888 (51 & 52 Vict. c. 41), in 1892 made and issued certain byelaws on the subject of the protection of theatres, etc. from fire. See their volume of Byelaws published in 1898.

On March 25th, 1902, the following regulations were made and issued. These are made under the same authority, there being no later enactment empowering the Council to make regulations with respect to the protection of theatres and music halls from fire.

### LONDON COUNTY COUNCIL.

#### THE PROTECTION OF THEATRES, &c., FROM FIRE.

*Regulations made by the Council on the 25th March, 1902, with respect to the electric lighting and heating arrangements of theatres, houses, rooms, and other places of public resort within the Administrative County of London (a).*

#### *Electric Lighting.*

Sanction of  
Council to be  
obtained to  
all work.

(1.) Before the installation of the electric light, or any electrical work or apparatus, and before any alterations or additions to the electric installation are commenced, the sanction of the Council shall be obtained to what is proposed to be done. For this purpose plans showing the approximate

---

(a) From the *London Statistics*, 1900—1901, p. cii., it appears that during that year the number of applications for licences for theatres and music halls was 323, and the number granted by the London County Council was 318. As to the duties of the Lord Chamberlain and the London County Council respectively in regard to theatres, etc., see pp. ci.—cii.

positions of the lights, and specifications, together with full particulars of the work it is proposed to carry out, and drawings of proposed switchboards, shall be forwarded to the Clerk of the Council, to whom also complete drawings shall be sent on completion of the work.

(2.) Where the electric light is permitted in such premises, it shall be on condition that a competent electrical engineer shall certify in writing, to the satisfaction of the Council, once in twelve months that the system is in proper working order. Tests.

(3.) Tests shall also be made by the officials of the Council from time to time.

(4.) All such premises when lighted by electric light shall have at least three separate and distinct main circuits— Main circuits.

(A) for the stage.

(B) and (C) for the auditorium, corridors, exits, and all parts of the house open to the public.

The circuits B and C shall be so arranged that approximately half the lights in each division of the auditorium and half those in each corridor, exit, &c., shall be on B and the other half on C circuit.

As far as practicable the lights on the two circuits shall be placed alternately.

In no case shall the two circuits be combined in one fitting, nor shall the wires or leads for one circuit be placed in the same box, tube, or casing, &c., as those of another circuit.

(5.) When the current is supplied by a public lighting company or corporation these circuits shall be taken separately from the street mains, each circuit being taken from a separate box and where practicable from a separate pair of mains. Where transformers are installed on the premises, separate transformers, with fuses, switches and other apparatus, shall be used for each of the three circuits, and the transformers, &c., for circuits B and C shall be placed in separate rooms, or in detached strong iron cases placed well apart, and the primary and secondary mains properly protected, or shall be divided by a fireproof partition. Supply by public lighting company.

(6.) Where supply is given on the 8-wire system, circuits A and B or A and C may be supplied from the two sides of that system, but the other circuit C or B, shall be taken from a separate connection with the street mains. Three-wire system.

(7.) The main leads, &c., for circuit A shall, where possible, be kept entirely on the stage side of the proscenium wall, and those for B and C entirely on the auditorium side of that wall. If it is desired to control a portion of the lights in the auditorium from the stage board (circuit A), this will be permitted if a sufficient number of lights, for safety purposes, be maintained on circuits B and C in each portion of the auditorium, entirely independent of the stage. The number and position of such lights shall be subject to the approval of the Council.

(8.) The supply for the three main circuits may be taken from the mains of independent companies, but in such case special precautions must be taken to prevent accidental connection. Independent companies.

Change-over switches may also be used if approved by the Council.

(9.) No unlicensed premises or parts of premises not included in a licence shall be supplied with electric current from the mains or apparatus used for the licensed premises. Change-over switches.  
Unlicensed premises.

(10.) In all circumstances complete metallic circuits shall be employed. Gas and water pipes shall never form part of any circuit. Metallic circuits.

**Sub-circuits.** (11.) The main circuits A, B, and C shall be subdivided as may be necessary.

The number of lamps shall be so sub-divided that no sub-circuit shall carry more than 10 ampères in the case of the auditorium, corridors, &c., or 40 ampères in the case of the stage; and each sub-circuit shall start from a distributing board. If the supply be given at a higher pressure than 100 volts the current in the sub-circuit shall be correspondingly reduced.

The same sub-circuit shall not be used for arc lamps and incandescent lamps.

Lights outside buildings shall be on sub-circuits entirely independent of inside lights. These outside sub-circuits may carry any current not exceeding 40 ampères if at 100 volts, or correspondingly less at any higher pressure.

Circuits for power or heating purposes shall be kept distinct and separate from lighting circuits.

**Dressing-rooms.** (12.) Dressing rooms and other parts of the premises used by the staff shall be lighted to the satisfaction of the Council.

**Conductors.** (13.) All conductors used within buildings shall be of tinned copper, having a conductivity equal to not less than 98 per cent. of that of pure copper, and shall be so proportioned to the work they have to do that the current density in any conductor shall not exceed a ratio of 1,000 ampères per square inch if the supply be given at or below a pressure of 115 volts. In case of the supply being given at a higher voltage, the density shall not exceed a ratio of 800 ampères per square inch.

The conductors shall be insulated with pure and vulcanised india rubber of approved quality.

**Cables. Insulation.** (14.) The insulation resistance shall be not less than 600 megohms per statute mile, at 60 degrees Fahr., after one minute's electrification, when tested with at least 400 volts, and after 48 hours immersion in water. If the pressure of the supply be above 115 volts the insulation resistance shall be 1,000 megohms per statute mile in lieu of the 600 specified above. Certificates of test shall be supplied to the Council if required.

(15.) The insulated conductors shall be protected on the outside by stout tape or braiding impregnated with preservative compound.

**Flexible conductors.** (16.) Flexible conductors (if composed of wires smaller than No. 25 s.w.g., shall be of untinned copper wire, if composed of larger wire, the wire shall be tinned) shall be insulated with pure and vulcanised india rubber, and have an insulation resistance of not less than 600 megohms per statute mile when tested as above, and shall be protected on the outside by a stout braiding and rubber tube where necessary (for instance in the orchestra). Should any of these flexible conductors be damaged they shall be at once replaced.

No circuit of this nature shall carry more than 10 ampères if the pressure of the supply be not over 100 volts, if the supply be given at a higher pressure the current shall be correspondingly reduced, and each circuit shall be protected by a fuse on each pole. The restriction to 10 ampères shall not apply to batten and hanging length circuits.

(17.) In all cases conductors conveying currents of high electro-motive force inside buildings, shall be specially and exceptionally insulated, and cased in, and the casing shall be made fireproof and connected to earth.

The positive and negative terminals connected to such conductors shall not be nearer to each other than 12 inches if the pressure exceeds 480 volts.

or 6 inches if the pressure exceeds 240 volts but is less than 480 volts, and the terminals shall be efficiently protected from risk of contact.

(18.) Joints in conductors shall be avoided, but when unavoidable, they shall be electrically and mechanically perfect. Soldering fluids shall not be used in making such joints. Joints.

(19.) If it is desired to use any other means of insulation than that above specified, special permission shall be obtained from the Council, and no material shall be used which is not waterproof, or protected by waterproof covering, or which will soften at a temperature below 170 degrees Fahr. Other means of insulation.

(20.) All conductors shall be efficiently protected from mechanical injury. Where conductors pass through walls, fire-proof floors, or ceilings, they shall be protected by iron pipes or by glazed stoneware or porcelain tubes, and precautions shall be taken to prevent the possibility of fire or water passing along the course of the conductors. Split tubing must not be used. Conductors, fixing and protection.

(21.) In special cases, or where necessary for protection from the depredations of rats, mice, or other vermin, armoured cables may be used.

These need receive no further mechanical protection, but the armouring shall be efficiently earthed.

(22.) Lead covered cables shall not be used unless protected by external armour of iron or steel or enclosed in substantial iron pipes or tubes.

(23.) Metal fastenings for fixing conductors shall be avoided as far as possible. When unavoidable some additional covering shall be used to protect the conductor, unless armoured, from mechanical injury at the points of support.

(24.) If casing be used, it shall be of hard wood, and each conductor shall be laid in a separate groove, unless previous permission be obtained from the Council to vary this condition. In no circumstances shall wires of opposite poles be laid in the same groove, nor wires of the same polarity belonging to different circuits A, B and C. The cover shall be secured with screws at the outer edges.

Casings shall, as far as possible, be placed in sight, and the conductors shall always be accessible.

Casing shall not be used where it is liable to injury from weather or leakage of water, nor shall it be recessed into plaster.

(25.) No soft or fusible metal tubing shall be used to contain conductors, nor shall any tubing which is not water-tight be embedded in walls or plaster or floors.

(26.) Where iron pipe or tube is used as a mechanical protection it shall be bushed where necessary, and proper joint boxes shall be used.

(27.) All external conductors shall be specially insulated and laid in iron pipes properly jointed and bushed, and of ample size. Proper joint boxes shall be used wherever joints occur in the conductors. In no case shall conductors belonging to different circuits (A, B and C) be run in the same barrel or be carried through the same boxes. External conductors.

Such iron pipes shall be protected where necessary, and securely fixed and supported when not underground.

(28.) Where there is a stage, it shall, if possible, be lighted by electric light only. Special care shall be taken that all works in connection with the lighting of the stage are carried out in as substantial a manner as possible. Stage lighting.

(29.) A switchboard, containing all the necessary switches, cut-outs, and other fittings for the control and regulation of the stage lighting shall be fixed in some convenient position preferably overlooking the stage. Stage switch-board.

This board shall be inaccessible to all but the persons employed at such premises to work it.

If the connections are made at the back of the board there shall be a space of not less than 8 feet between the wall and the back of the board, or such larger space as may be necessary to ensure the thimbles and connections being at all times easily accessible, or, as an alternative, provision shall be made by hinging the board or placing it on rollers for rendering the back of the board accessible without breaking the connections or dismounting the board.

(80.) No metal work in connection with the circuits shall be exposed or so fixed or constructed as to be liable to cause a short circuit.

Footlights,  
etc.

(81.) Lamps on battens, footlights, &c., shall be protected by stiff wire guards, so arranged that no scenery or other inflammable material can come in contact with the lamps.

(82.) No readily combustible material shall be used in connection with any lamps in such a manner that it might come in contact with the lamps.

(83.) No soft or readily inflammable wood shall be used in connection with the lamps, and all wood shall be protected by unflammable material from the possibility of ignition by an arc between any two parts of the two conductors, or by heated particles from any conductor or part of a conductor which may connect together the two main conductors.

Stage sockets.

(84.) The sockets for the stage shall be of hard wood, vulcanite, or slate, with metal guards, care being taken to avoid risk of ignition, and they shall be of specially substantial construction.

(85.) Where a number of lights, as in the footlights, battens, &c., are supplied under control of one switch, and protected by one single or double pole cut-out, as the case may be, the conductors shall be maintained throughout of such a section that they will be effectually protected by the cut-outs against heating.

Battens.

(86.) The leads to the battens shall be specially guarded, particularly at the points where they join on to the battens, and a sufficient length shall be allowed to prevent the leads receiving any injury through any movement of the battens, and this part of the leads shall be protected by leather or stout waterproof canvas hose, properly fixed.

The battens shall be suspended by at least three wire ropes attached to insulators on the battens.

On no account shall the same battens be adapted for both gas and electric light.

Arc lamps.

(87.) Arc lamps shall not be used inside such premises without special permission from the Council.

When they are used special precautions shall be taken to guard against danger from falling glass or incandescent particles of carbon.

All parts of the lamps, lanterns, and fittings which are liable to be handled (except by the persons employed to trim them) shall be insulated from the framework.

In no case shall arc lamps be suspended by the conductors.

Cut-outs.

(88.) All circuits shall be efficiently protected by cut-outs, placed in positions easily accessible to the staff, but inaccessible to the public.

All cut-outs shall be of such pattern and be fixed in such a position as to admit of quick replacement.

All circuits carrying a current of 10 ampères or more shall be provided

with a cut-out on each conductor, and the two cut-outs shall not come in the same compartment.

All cut-outs shall be so constructed that fused metal in falling cannot cause a short circuit or an ignition.

All cut-outs shall be so marked as to show what circuit or lamps they control.

(39.) All exposed metal work, such as fittings, switch and fuse covers, &c., shall be efficiently insulated from the circuits. Switches, cut-outs, &c.

All switches, cut-outs, ceiling roses, wall and floor sockets and lampholders, shall have unflammable bases and covers.

All switches and cut-outs shall have sufficient length of break, and shall be constructed so as to prevent the risk of formation of an arc. All lampholders shall be of bayonet-socket form and shall be fitted with porcelain bridges or some equivalent separation between poles.

All switches shall be of ample size to carry the currents for which they are intended without heating, and shall be so constructed that it will be impossible for them to remain in any position intermediate between the "on" and the "off" positions, or to permit of a permanent arc or short circuit.

(40.) All fittings shall be suspended in an approved manner, and special care taken to avoid risk of suspension failing from any cause.

(41.) Combined gas and electric fittings shall not be used.

(42.) All switch and fuse-boards which are not fitted with front connections shall be so mounted as to give instant and easy access to the connections at the back of the board, and shall be provided with dividing strips between poles, both at back and in front, and proper lock-up cases with glass fronts, the glass (unless plate of adequate thickness) shall be protected with a wire guard or boxes with lids and sides rendered fire-proof by asbestos sheeting or some equivalent method may be used.

(43.) Resistances for regulating the power of the lights or motors or for other purposes shall be mounted on incombustible bases, and shall be so protected and placed at such a distance from any combustible material that no part of the resistance, if broken, can fall on such material or *vice versa*. Resistances.

Principal metallic resistances shall be placed in a fire-proof room reserved for the purpose. Liquid resistances shall be provided with proper trays and stands.

(44.) Where the supply of current is derived from special plant on the premises or under the control of the licensee, such plant must in all cases be approved by the Council. It must be in duplicate. Such duplication may be provided either by not fewer than two separate boilers, engines and dynamos, each capable of supplying the maximum ordinary load, or, in lieu of one engine and dynamo, a battery of approximately equal capacity for a minimum period of five hours, and such battery shall be fully charged before the commencement of every performance, or another alternative may be adopted by obtaining a full supply from the mains of a public company or borough council by means of proper change-over switches. The position and the construction of the change-over switches shall be subject to the approval of the Council. Where gas engines are used, a battery or other duplicate supply shall be provided, gas engines alone shall not be accepted as sufficient. No unlicensed building or unlicensed portion of a building shall be supplied from any part of the installation of the licensed part of the Generating plant.

building unless the installation in such unlicensed portion is open to inspection and testing by the Council. The switch-board and its fittings must be to the satisfaction of the Council.

(45.) Boilers, steam engines, gas engines and dynamos, when used for the supply of electricity to such premises shall be placed in such positions as shall be sanctioned by the Council.

All necessary provision shall be made for keeping the temperature of the engine-rooms within proper limits.

**Gas engines.** (46.) Gas engines shall be placed in rooms so adequately and continuously ventilated that no explosive mixture of gas can accumulate by any leakage through the engine in the event of any of the gas cocks being left turned on.

A hood connected with a pipe carried into the external air, shall be fixed over the ignition tube when this is used.

**Batteries.** (47.) Primary or secondary batteries shall be placed in rooms so adequately ventilated to the outside air that no fan shall be necessary. These rooms shall be of fire-proof construction with iron doors.

The batteries shall be well insulated.

**Transformers.** (48.) Transformers used to transform either direct or alternating currents, together with the switches and cut-outs connected therewith, shall be placed in a fire and moisture proof structure adequately ventilated to the outside air, and accessible to the management.

(49.) Where the primary current is of high potential, such structure shall be, preferably, outside the building.

No part of such apparatus shall be accessible except to the persons in charge of its maintenance.

(50.) The outer case of all transformers shall be efficiently connected to earth.

(51.) Proper labels indicating the circuit controlled shall be affixed to all transformers, main switches, fuses, &c.

(52.) No transformer which, under normal conditions of load, heats above 180 degrees Fahr., shall be used.

(53.) Transformer circuits shall be so arranged that in no circumstances shall a contact between the primary and the secondary coils lead an electro-motive force of high pressure into the building.

**High pressure.** The term high pressure means in all cases throughout these regulations pressure above 240 volts.

**Insulation resistance.** (54.) The insulation resistance of a system of distribution shall be such that the greatest leakage from any conductor to earth, when all branches are switched on, shall not exceed one sixty-thousandth part of the total current intended for the supply of the said lamps and motors; the test being made at the usual working electro-motive force. Provided that this rule shall not be held to justify a lower insulation resistance than 10,000 ohms.

**Supervision.** (55.) The generating plant and switching gear shall be in the hands of thoroughly competent manipulators, and the engine room (if any) shall be inaccessible to the public, and shall, where possible, have an independent entrance.

**Motors, &c.** (56.) Motors or electrical heating apparatus shall, if permitted, be subject to special conditions, but electric fans and similar motors not taking more than 800 watts may be used if separately wired from fuses on a proper distributing board.

**Plan of wiring.** (57.) A plan of the wiring shall be always kept in a prominent position in the office of the manager of such premises.



(58.) In all cases in which it is desired to instal temporary lighting, notice shall be given to the Clerk of the Council in writing as long as possible before it is desired to commence the work. Temporary lighting.

Wires and cables shall be adequately and firmly fixed, and shall be similar to the wires already specified in these regulations, and in all cases where the wires are within reach of the public, they shall be cased.

All joints shall be soldered and taped if used for more than one week, and if used less than a week the wire shall be soldered if larger than 7/20 s.w.g., or its equivalent. In either case the joints shall be taped.

The circuits shall be sub-divided as much as possible, no sub-circuit exceeding 10 ampères.

All temporary work shall be immediately removed when no longer required for the purpose for which it was installed.

In the case of temporary work on the stage, all connections to the permanent installation shall be removed immediately after each performance in which they are used unless permission be obtained to the contrary.

Such special conditions as may be requisite in each case will be attached to the consent of the Council to the use of temporary electrical work.

#### *Heating.*

(1.) No fire-place shall be formed in any portion of the auditorium or stage of such premises. Fire-places.

(2.) All open fire-places or stoves in any other part of such premises shall be protected by strong fixed iron-wire guards and fenders of not more than 1½ inch mesh completely enclosing the fire. A part of the guard or fender may be made to open for all necessary purposes. Guards for fire-places or stoves.

(3.) The system of heating shall be by hot air, low pressure hot water, or low pressure steam. The high pressure hot water system with sealed pipes shall not be permitted. System of heating.

(4.) The boiler, furnace, oven or other heating apparatus shall be placed in a situation to be approved by the Council, and shall be enclosed upon all sides by brick walls not less than 9 inches thick, which shall be properly roofed and ventilated. Position of boiler, furnace, &c.

(5.) All hot water or steam pipes, or coils, shall be recessed in the walls where necessary, or shall be otherwise arranged so as not to diminish the clear width of the gangways, and, where necessary, shall be provided with guards. Where the pipes are placed in trenches below the level of the floor and covered by grids or gratings, such trenches shall be sufficiently large to admit of being thoroughly swept. Width of gangways not to be diminished.  
Pipe trenches.

(6.) All radiators placed in those parts of the premises to which the public has access shall be protected with stout wire guards, or otherwise to the Council's satisfaction. Radiators to be protected.

(7.) Each boiler or heating apparatus when new shall be tested, in the presence of an official of the Council, by hydraulic pressure to twice the working load. The licensee shall furnish annually to the Clerk of the Council a satisfactory certificate that such boiler or heating apparatus has been inspected, tested, and approved as safe by a competent person within 14 days from the date of such certificate. Inspection and testing of apparatus.

(8.) The expense of such testing shall be borne entirely by the licensee of such premises. Expense of testing.

(9.) Where the hot water circulation system is adopted, the boiler may be of the cylindrical, saddle, or other approved type, and made of wrought iron, Hot water circulation system.

mild steel or copper, or may be of an approved sectional type and made of cast iron or cast steel.

(10.) The boiler shall be provided with a dead weight or other approved safety valve, either of the lock-up type, or protected by an approved locked guard. The valve shall have an independent attachment to the boiler, and where connecting pipes are used they shall be of wrought iron or copper and shall not be used for any other service.

(11.) The valves shall not in any circumstances be fixed to the circulating pipes, and shall be placed in such a position as will ensure protection from soot and dirt.

**Steam system.** (12.) The supply cistern and all pipes in exposed situations shall be adequately protected against the action of frost.

(13.) The pipes throughout the system (with the exception of such connections or fittings as may be of copper) shall be of the strongest standard section of wrought iron or steel tubing, or of a strong section of cast iron or cast steel, and all iron or steel feed pipes below  $1\frac{1}{2}$  inches in diameter shall be galvanized.

(14.) The term low pressure shall be understood to mean the pressure due to the vertical head of water between the boiler and the supply cistern.

(15.) Where the steam system is adopted the boiler may be of the plain cylindrical, multitubular, or other approved type, and made of wrought iron, mild steel or copper, or may be of an approved sectional type, and made of cast iron or cast steel.

(16.) The boiler shall be provided with a dead weight or other approved safety valve, either of the lock-up type or protected by an approved locked guard.

(17.) The valve shall have an independent attachment to the boiler, and where connecting pipes are used they shall be of wrought iron or copper and shall not be used for any other service.

(18.) The pipes throughout the system (with the exception of such connections or fittings as may be of copper) shall be of the strongest standard section of wrought iron or steel tubing, and all iron or steel feed pipes below  $1\frac{1}{2}$  inches in diameter shall be galvanized.

(19.) The term low pressure shall be understood to mean a maximum pressure of fifteen pounds per square inch above the pressure of the atmosphere.

(20.) The boiler may be worked at any approved pressure, and if such pressure exceeds fifteen pounds per square inch a reducing valve shall be attached to the boiler, having a safety valve and pressure gauge on the outlet side, the valve to be loaded to a pressure not exceeding fifteen pounds per square inch, which shall be the maximum pressure allowed on any part of the heating system apart from the boiler house.

G. L. GOMME,  
Clerk of the Council.

## V.—LONDON OVERHEAD WIRES.

## LONDON OVERHEAD WIRES ACT, 1891.\*

(54 &amp; 55 VICT. CH. LXXVII.)

*An Act to provide for the control and regulation of Overhead Wires in the Administrative County of London.*

[3rd July 1891.]

WHEREAS the number of wires and cables placed overhead within the administrative county of London has increased and is increasing and such wires and cables are subject to no efficient system of control or regulation and it is expedient that provision should be made as in this Act contained for the control and regulation of all such wires under byelaws made as herein-after provided and for the removal or alteration of such wires and cables in certain cases :

And whereas the objects aforesaid cannot be accomplished without the authority of Parliament :

May it therefore please Your Majesty that it may be enacted and be it enacted by the Queen's most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled and by the authority of the same (as follows) :—

1. This Act may be cited for all purposes as the London Overhead Wires Act 1891 and shall extend and apply to the administrative county of London.

Short title  
and extent  
of Act.

\* Special attention is directed to four sections of this Act (16—19), which are of special interest in connection with undertakings authorised under the Electric Lighting Acts, 1882 and 1888. By s. 16 nothing may be done which is inconsistent with any regulation or condition of the Board of Trade for securing the safety of the public or for the protection of the electric lines of the Postmaster-General. By s. 17 nothing in the Act or any byelaw made in pursuance thereof shall apply to any undertakers acting under special Act, Provisional Order, or licence under the Electric Lighting Acts, 1882 and 1888, or to any wires of such undertakers. By s. 18, private wires placed by any person over land in his own occupation are exempted from the Act under certain conditions. By s. 19 no powers of placing wires for electric lighting purposes overhead may be conferred on any company, body, or person, not authorised so to place such wires by special Act, Provisional Order, or licence under the Electric Lighting Acts, 1882 and 1888.

For cases in relation to overhead wires, though not decided under the London Overhead Wires Act, 1891, see *Wandsworth Board of Works v. United Telephone Co.*, (1884) 13 Q. B. D. 904 ; *Lery v. National Telephone Co.*, *Times*, December 18th, 1897 ; *Cristofer v. National Telephone Co.*, *Electrician*, December 9th, 1898, p. 240, cited *ante*, p. 111 ; *National Telephone Co. v. Constables of St. Peter Port*, [1900] A. C. 317 ; *Finchley Electric Lighting Co. v. Finchley Urban District Council*, [1902] 1 Ch. 866, cited *ante*, p. 217.

Interpre-  
tation.

**2. In this Act—**

The expression “the Council” means the London County Council :

The expression “the county” means the administrative county of London ;

The expression “Local Authority” means—

As regards any street road embankment bridge park garden or open space vested in the Council or under their control and management the Council ;

Subject as aforesaid—

As regards the city of London the Commissioners of Sewers of the city of London ;\*

As regards any parish named in Schedule A to the Metropolis Management Act 1855 or any parish which under any subsequent Act is to be dealt with as if named in the said schedule the vestry of that parish as constituted under the said Acts ;

As regards any district mentioned in Schedule B of the Metropolis Management Act 1855 and not dissolved by any Act amending the same the district board of such district as constituted under the said Acts ;

And as regards any place mentioned in Schedule C of the Metropolis Management Act 1855 the Council ;

The expression “the Company” means and includes any Company or person having placed or claiming any power to place any wire overhead in the county ;

The expression “street” has the meaning assigned thereto in the Metropolis Management Act 1855 and the Metropolis Management Amendment Act 1862 ;

The expression “wire” includes any wire conductor or cable and any support or attachment thereto any part of which is placed or shall hereafter be placed over any street or any part of any street and also any wire conductor cable support or attachment placed or intended to be placed on or over any building or land and situate at any point within a distance of fifty feet from any street but shall not include any such wire conductor cable support or attachment which is placed or may be placed wholly upon or over any railway or

---

\* By the City of London Sewers Act, 1897 (60 & 61 Vict. ch. cxxxiii.), the Commissioners of Sewers of the City of London were dissolved, and their duties were transferred to the Common Council of the City.

any land belonging to a railway company and used as a railway station siding or yard or any part of any such wire conductor or cable being upon or over any railway or such land ;

The expression " telegraphic line " has the same meaning as in the Telegraph Act 1878.

3. From and after the passing of this Act the Company shall within one month after they shall have placed any wire overhead give notice in writing to the Council and the Local Authority specifying the locality and position in which the wire has been placed and after byelaws in relation to wires shall have been made under the powers of this Act it shall not be lawful to place any wire overhead otherwise than subject to and in accordance with such byelaws.

New over-head wires not to be placed except in accordance with byelaws.

4. The Company by carrying a wire over any land or building or supporting such wire thereon or attaching the same thereto shall not otherwise than by agreement with the owner of and persons interested in such land or building acquire any right which shall in any way interfere with any right of such owner or other person and if at any time by reason of any alteration rebuilding or otherwise it becomes necessary for any such owner or person to require the Company to alter or remove any such wire the Company shall alter or remove the same accordingly on being required so to do by notice in writing by such owner or person :

Rights over private property not to be acquired except by agreement.

And in the event of the Company refusing or neglecting for the space of one month after such requisition to alter or remove the same it shall be lawful for any inspector officer or workman duly appointed by the Council with the consent of such owner or person to remove or alter the same and to enter upon the land or building for that purpose and the costs and expenses of and incidental to such removal shall be repaid by the Company to the Council on demand and in default of payment may be recovered in a summary way :

As regards the city of London this section shall be read and have effect as if the Commissioners of Sewers were named therein instead of the Council.\*

5. Subject to the provisions of this Act the Council may from time to time make and vary byelaws with respect to any of the following matters :—

Byelaws.

The identification of overhead wires by registration or otherwise ;

---

\* See footnote, previous page.

The regulation of wires ;

The strength of the materials to be employed in placing maintaining and supporting wires ; and

The removal of wires erected or placed otherwise than in accordance with such byelaws and of disused wires :

And they may by such byelaws fix and determine the penalties to be imposed on the Company or any person failing to comply with any of the provisions of this Act and the continuing penalties to be imposed in the event of any such offence being continued after conviction thereof :

Provided that no such byelaw shall have any force or effect until it shall have been approved by the Board of Trade who may prescribe to whom and in what manner notices of the intended byelaws shall be given and provided also that before any such byelaws are proposed to the Board of Trade for confirmation notice thereof with copies of the intended byelaws shall be given to the Postmaster General :

After the making of any such byelaws a copy thereof shall be published in the London Gazette and in such other newspapers as the Board of Trade may direct :

Provided also that the Board of Trade may exempt any then existing wire from the operation of any such byelaw for such period as they think proper not exceeding five years from the confirmation thereof.

See the Byelaws made under authority of this section, *post*, p. 832.

Enforcement  
of byelaws  
by Local  
Authority.  
Providing  
for uni-  
formity in  
enforcement  
of byelaws.

6. Byelaws under this Act shall subject to the provisions of this Act be enforced and administered by the Local Authority.

7. If in any case in any one or more of the parishes or districts within the county any byelaw under this Act is in the opinion of the Council inadequately enforced or if in any two or more of such parishes or districts owing to want of uniformity in the method of administering any byelaw the Council consider it is expedient in the public interest that provision should be made for duly enforcing such byelaw or establishing uniformity in the application and enforcement of the same the Council may apply to the Board of Trade who may after hearing any vestry or district board concerned if they desire to be heard make under the hand of a secretary or assistant secretary such order for securing the enforcement of such byelaw or for establishing uniformity in the administration thereof as they may think expedient. Any such order may include a power to the Council to enforce any byelaw in any case in any parish or district and to recover any expenses incidental thereto from the vestry or district board.

8. It shall be lawful for the Council or the Local Authority as the case may be to appoint and employ an inspector or inspectors of wires and such other officers and workmen as they may find requisite for the purposes of this Act.

Inspectors of  
overhead  
wires.

9. If at any time on the report of any of their inspectors it shall appear to the Local Authority that any wire is in such a condition that danger to the public using the streets may be apprehended the Local Authority may serve notice in writing on the Company requiring them to remove renew or alter the same and to place such wire in such position as the Local Authority may reasonably determine and in the event of such requisition not being complied with within such reasonable time as shall be therein specified it shall be lawful for the Local Authority to apply to a court of summary jurisdiction to issue a summons calling on the Company to show cause why the wire should not be dealt with in accordance with such requisition and such court may make an order authorising the Local Authority or any of their inspectors or officers to remove or alter any such wire and to charge the expenses of such removal or alteration on the Company to whom the wire belongs as may be prescribed in such order. And such expenses may be recovered under the provisions of the Summary Jurisdiction Acts :

Removal of  
existing  
overhead  
wires.

Provided that the local authority may at any time after byelaws shall have been made and published under the provisions of this Act proceed under this section without any such notice or requisition in the case of any wire not being in accordance with such byelaws and at any time after such byelaws are made and published it shall be lawful for the Council or Local Authority to remove any such wire if they are unable to ascertain the owner thereof.

10. Nothing in this Act or in any byelaw made under this Act or any compliance with any of the provisions of this Act or of any such byelaw shall relieve the Company from any liability in respect of damage caused by any wire or support or attachment or the failure thereof or otherwise due to any works or operations of the Company.

As to  
liability for  
accidents.

11. Where under the provisions of this Act any matter is referred to an arbitrator the reference shall be to an arbitrator who shall be appointed by the Board of Trade on the application of the Council Local Authority or the Company to whom the question refers.

Arbitrator.

12. No writ shall be issued and no proceeding shall be instituted against the Council Local Authority or any officer or person acting

Notice to be  
given of  
legal pro-  
ceedings.

under their authority in reference to this Act except after such notice and subject to such conditions as are specified in section 106 of the Metropolis Management Amendment Act 1862 which section shall be deemed to be incorporated with this Act.

Section 106 is repealed by the Public Authorities Protection Act, 1893 (56 & 57 Vict. c. 61). See that Act for substituted enactment in regard to the conditions under which such actions may be maintained.

Recovery of penalties.

**13.** Every sum of money required by this Act to be paid to the Council or Local Authority and every penalty imposed by any byelaw made in pursuance of this Act may be recovered by the Council or Local Authority in a summary way.

Application of penalties.

**14.** All penalties which may be recovered under any of the byelaws made under the powers of this Act shall notwithstanding anything contained in an Act made and passed in the session holden in the second and third years of the reign of Her present Majesty chapter 71 or in any other Act or Acts to the contrary if recovered by the Council be paid to the Council and be carried by them to the credit of the county fund or if recovered by the Local Authority be paid to their treasurer to their account or if recovered by the Commissioners of Sewers be carried to the credit of their consolidated rate.

As to application of penalties see *Wray v. Ellis* (1858), 1 E. & E. 276; and *Reg. v. Titterton, ex parte Quelch*, [1895] 2 Q. B. 61.

As to Commissioners of Sewers, see footnote, *ante*, p. 326.

Evidence of byelaws.

**15.** The production of a written copy of a byelaw made under this Act if authenticated by the corporate seal of the Council shall until the contrary is proved be sufficient evidence of the due making and existence of the byelaw and of the byelaw having been approved by the Board of Trade.

Wires not to be inconsistent with regulations of Board of Trade.

**16.** The Company shall not under the powers of this Act or any byelaw made under this Act be required to place any wire in any manner which shall be inconsistent with any regulation or condition for securing the safety of the public or for the protection of the electric lines and works of the Postmaster General made prescribed or imposed by the Board of Trade under the Electric Lighting Acts 1882 and 1888 or under any special Act or Provisional Order or license under the provisions of the Electric Lighting Acts 1882 and 1888 or either of them.

As to authorised electric lighting undertakers and wires.

**17.** Nothing in this Act or any byelaw made in pursuance thereof shall apply or extend to any undertakers acting under special Act Provisional Order or license under the Electric Lighting Acts 1882 and 1888 or to any wires of such undertakers.



18. Nothing in this Act shall extend to any wire placed by any person for his private use over land belonging to him or in his occupation which does not extend over any street and is so constructed and placed that neither the wire nor any support thereof or attachment thereto would be liable to fall into any public street.

Exempting private wires.

19. Nothing in this Act contained shall be deemed to authorise the Council to confer any powers of placing wires for electric lighting purposes overhead on any company body or person not authorised so to place such wires by a special Act Provisional Order or license under the provisions of the Electric Lighting Acts 1882 and 1888.

Not to authorise placing unauthorised wires overhead.

20. Nothing in this Act shall authorise any wire to be carried over supported on or attached to any land building or structure in the occupation and under the management of or maintained by Her Majesty or Her Majesty's Duchy of Lancaster or the Duchy of Cornwall or any department of Her Majesty's Government or shall authorise any entry upon any such land building or structure without in each case the consent of the department of Her Majesty's Government or of the officer or body charged with the management of such land building or structure.

Exemption of Government and Crown property from powers as to overhead wires.

21. Nothing in this Act or in any byelaws made in pursuance of this Act shall be deemed to apply or extend (except by way of protection) to any telegraphic line belonging to or used by the Postmaster General or to any support or attachment thereof and nothing in this Act or in any such byelaws shall be deemed to take away abridge or prejudicially affect any right power or privilege enjoyed by the Postmaster General.

Saving for Postmaster General.

22. All costs and expenses of any vestry or district board in the execution of this Act or any byelaws under this Act shall be paid as part of the expenses of such vestry or district board of executing the Metropolis Management Act 1855 and the Acts amending the same, and all costs and expenses of the Commissioners of Sewers in the execution of this Act or any byelaws under this Act shall be paid out of the consolidated rate as part of the expenses of such Commissioners.

As to payments by Local Authorities under this Act.

As to Commissioners of Sewers, see footnote, *ante*, p. 326.

23. All costs and expenses of the Council in the execution of this Act (except so far as they may be otherwise provided for by this or any other Act) shall be defrayed as payments for general county purposes within the meaning of the Local Government

As to payments under this Act.

Act 1888 and the costs charges and expenses preliminary to and of and incidental to the preparing applying for obtaining and passing of this Act shall be paid by the Council in like manner.

## THE ADMINISTRATIVE COUNTY OF LONDON.

### BYELAWS—OVERHEAD WIRES.

*Byelaws made by the London County Council in pursuance of the London Overhead Wires Act, 1891.*

[N.B.—The Act (see s. 18) does not extend to any wire placed by any person for his private use over land belonging to him or in his occupation, which does not extend over any street, and is so constructed and placed that neither the wire nor any support thereof or attachment thereto would be liable to fall into any public street.]

In these byelaws—

The expression “the Act” means the London Overhead Wires Act, 1891.

The expression “wire” has the same meaning as in the Act, except that it does not include any support or attachment.

The expression “cable” means any covered or insulated wire, of which the diameter to the outside of the covering exceeds twice the diameter of the bare wire, and where more wires than one are enclosed in the same covering or insulation, includes all such wires and covering, without reference to diameter.

### *General.*

1. The Company shall deliver to the Council and the local authority full particulars of the material and gauge of the wires of the Company, and the nature and position of the several supports, and the length of span between the several supports. The Company shall also deliver to the Council a plan, on a scale of not less than 25 inches to the mile, showing the routes of such wires and the position of the supports, or at their option shall cause the routes of such wires and the position of the supports to be marked upon a map to be supplied for the purpose at the office of the Council.

### *Existing wires.*

2. In the case of wires or supports existing at the date of the approval of these byelaws the Company shall comply with the requirements of byelaw 1 within six months after that date.

### *New wires.*

3. In the case of new wires or supports placed after the date of the approval of these byelaws, the Company shall comply with the requirements of byelaw 1 within one month after the placing thereof.

4. A wire shall not be placed so as at any point to be at a less height above the ground than 20 feet, or where it crosses a street 35 feet, or at a less height above the roof of any building than 6 feet, except where it is brought into any building for use in that building, or is attached to a chimney or other part of a building in accordance with these byelaws.

5. Every wire shall be supported at intervals not exceeding 115 yards unless permission in writing be obtained from the Council and the local authority for a longer span.

6. Every support for a wire shall be of durable material, and properly stayed against forces due to wind pressure, change of direction of the wires, and unequal length of span; and all independent conductors and suspending wires shall be securely attached to the supports.

7. The factor of safety for all stresses arising from the weight of conductors and suspending wires shall be at least four at a temperature of 22° F. The factor of safety for all other parts of the structures shall be at least ten, taking the maximum possible wind pressure against a support acting in a horizontal direction at 80 lbs. per square foot. No addition need be made for a possible accumulation of snow.

8. Every support for a wire shall be marked in such manner to be approved in the case of each Company by the Council as to identify the company to whom it belongs.

9. Where a support is used for the wires of more than one company, the company owning the support shall be responsible for the support and the attachment of the wires thereto.

10. No cable shall exceed one pound per lineal foot in weight; and every cable shall be carried by independent suspending wires and attached to the same by efficient slings.

11. Every iron or steel wire, and every iron or steel support or attachment, shall be efficiently protected from oxydation.

12. All poles erected on buildings as supports for wires, unless fixed through the roof, shall be carried on shoes or saddles properly protected from oxydation and shall be efficiently stayed, so that in the event of a pole breaking it shall be impossible for it to fall into any street.

13. Every wire, attached to a chimney, wall, or other part of a building, shall be efficiently supported by angle plates of iron or bronze or other device approved by the local authority.

14. Every wire support and attachment shall be duly and efficiently supervised and maintained by the Company.

15. No wire support or attachment shall be in such a condition that danger to the public using the streets may be apprehended therefrom, and the Company to whom any wire, support, or attachment being in such condition belongs, shall be guilty of an offence against these byelaws.

16. No wire support or attachment shall remain erected after it has ceased to be in use, unless the Company intend within a reasonable time to take it again into use, and give notice of such intention to the Council and the local authority.

17. On reasonable notice being given by the Council or the local authority to the Company, access at all reasonable times for the purpose of inspection of the Company's wires, supports, and attachments shall be given or secured by the Company to the inspectors of the Council and the local authority.

#### *Penalties.*

18. Any Company or person failing to comply with any of these byelaws, or of the provisions of the London Overhead Wires Act, 1891, or delivering any particulars which to their or his knowledge are incorrect, shall be guilty to an offence against these byelaws, and shall be liable to a penalty not

exceeding five pounds, and to a further penalty not exceeding forty shillings for each day during which such offence is continued after conviction thereof.

Sealed, by Order,  
H. DE LA HOOKE,  
Clerk of the Council.

L.S.

Approved on behalf of the Board of Trade.

HENRY G. CALCRAFT,  
Secretary.

29th July, 1892.

## VI.—ELECTRIC LIGHTING (LONDON) BILL OF SESSIONS 1901 AND 1902.

In consequence of the re-adjustment of the boundaries of the areas of local authorities in London owing to the coming into operation of the London Government Act, 1899, it became necessary also to readjust the boundaries of the electric lighting areas, so as to make these boundaries co-terminous. A Bill for the purpose was introduced into Parliament by the Government in the Session of 1901, but was withdrawn on August 5th of that year. The object of the Bill is clearly stated in the following circular addressed by the Board of Trade to undertakers of electric supply within the administrative County of London:—

### ELECTRIC LIGHTING (LONDON) BILL.

Board of  
Trade  
circular.

"I am directed by the Board of Trade to advert to the Bill which was introduced into Parliament last session by this department to provide for the alteration and readjustment of electric lighting areas in London, so as to make them, as far as possible, co-terminous with the areas of local government fixed by the London Government Act, 1899, and the Orders in Council authorised by and made under the provisions of that Act.

"From inquiries which were made by the Board of Trade last year, it appeared that there were 216 cases where, by reason of the adjustments made by Orders in Council, the boundaries of the electric lighting areas of local authorities had become different from the boundaries of the new boroughs, and in 177 of these cases no electric lighting works had then been laid down. As a rule, the alteration of boundary is very small, and the Board consider it very desirable that all the alterations should be dealt with wherever it can be done without injustice to the undertakers concerned, more particularly in the large number of cases where no works have been laid down. It is, therefore, proposed that a bill on the same lines as the bill of last session shall be introduced in the ensuing session.

"I am at the same time to state that the Board realise that it may be necessary to deal exceptionally with parts of areas affected by the bill in which works have been executed for the supply of electricity, and in some of the cases at any rate, to exclude or suspend the compulsory operation of the bill, but before deciding what form the special provisions for the

purpose shall take, the Board will be happy to consider suggestions from electric lighting undertakers who may be concerned in the matter. If your council desire to submit any suggestions, the Board will be glad to receive them at an early date.

"I am to add that it is proposed that the bill shall follow the form of the bill of last session in the following particulars, viz. :—

- (1.) Where the electric lighting area of a local authority was originally only part of what is now a borough, it is not proposed to extend that area to the whole borough, but merely to deal with small adjustments of boundaries.
- (2.) It is proposed to make provision, where necessary, for the undertakers who are now authorised to supply electricity in any of the areas affected to give such supply until arrangements can be made for supply to be given by the undertakers having powers in respect of the borough to which the area is transferred.
- (3.) It is proposed that the bill shall provide for the confirmation of any arrangements which may be made between two or more electric lighting companies for the purpose of making their common boundary agree with the altered boundaries of the areas of local government." (*Electrician*, December 18th, 1901, p. 314.)

In the Session of 1902 a similar bill was introduced by the Government, but was again withdrawn. It will no doubt be again introduced in the Session of 1903.

---



## PART III.

---

### ELECTROLYSIS, TRACTION, AND POWER.

	PAGE
I. LEAKAGE AND ELECTROLYSIS.....	389
II. TRAMWAYS AND LIGHT RAILWAYS.....	374
(1) TRAMWAYS WORKED BY ELECTRICAL POWER ...	374
REGULATIONS MADE BY THE BOARD OF	
TRADE .....	377, 381, 383, 388, 392
(2) LIGHT RAILWAYS WORKED BY ELECTRICAL POWER	397
REGULATIONS MADE BY THE BOARD OF	
TRADE .....	400
(3) RETURN OF ACCIDENTS BY TRAMWAYS AND	
LIGHT RAILWAYS .....	400
III. TUBE AND OTHER RAILWAYS AUTHORISED TO BE WORKED	
BY ELECTRICAL POWER .....	403
(1) THE VARIOUS COMPANIES SO AUTHORISED .....	403
(2) POWERS USUALLY CONFERRED BY TUBE RAILWAY	
ACTS .....	418
(3) REGULATIONS MADE BY THE BOARD OF TRADE	430
IV. POWER ACTS .....	438





## I. LEAKAGE AND ELECTROLYSIS.

The question of the liability of undertakers for damage done by electrolysis arose in the High Court in 1893, when the case of the *National Telephone Company v. Baker* was decided by KEEWICH, J. ([1893] 2 Ch. 186). It had been decided in the House of Lords in the case of *Rylands v. Fletcher* (1868), L. R. 3 H. L. 330, that, in the absence of statutory powers, the general rule of law is that if a person brings on to his own land any matter which, if it escapes, may prove injurious to his neighbour's property, such as a large body of water, he is liable to make compensation for any injury that may accrue from its escape out of his land; and that it is no defence if it escapes and causes damage to his neighbour, that the injury was caused without any default or negligence on his part. In the case of the *National Telephone Company v. Baker*, [1893] 2 Ch. 186, the learned Judge held that inasmuch as the defendant was acting under the statutory authority of a provisional order confirmed by Parliament, the nuisance complained of was protected to the same extent as other nuisances necessarily arising from the exercise of powers conferred by Parliament—that is to say, where there is no special clause inserted to the effect that nothing in the Act (or provisional order) contained, shall exempt the undertakers from liability to indictment or other proceeding for nuisance. The facts of the case were as follows:—The plaintiff company carried on business throughout the United Kingdom under licence from the Postmaster-General for a term of years, supplying telephonic communication, principally by what was called the “Telephone Exchange” system. The system was worked on what was known as the “single wire system,” the electric circuit being completed by the earth—that is, each end of the wire passed into the earth, which thus acted as a return conductor. At Leeds the company had been in operation since 1880, and at the time of the action there were 1,200 subscribers and separate wires. In 1888 the Corporation of Leeds obtained

*National  
Telephone Co.  
v. Baker.*

a provisional order authorising them to construct certain specified tramways, with all proper rails, works, and conveniences. By sect. 16 of the Order it was provided that the carriages used in the tramway might be moved by animal power and, with the consent of the Board of Trade, by various other methods, including electric power, the use of any power other than animal power being subject to certain regulations contained in Schedule A. to the Order, "and to any regulations which may be added thereto or substituted therefor, respectively by any order which the Board of Trade may, and which they are hereby empowered to make from time to time as and when they may think fit, for securing to the public all reasonable protection against danger in the exercise of the powers by this Order conferred with respect to the use on the tramways of any such power as aforesaid other than animal power." By sect. 51 it was enacted that in the event of any tramways of the promoters being worked by electricity, "it shall not be lawful for the promoters to lay down any line or rail or to do any act or work for working such tramways by electricity, whereby any telegraphic line of the Postmaster-General is or may be injuriously affected." This section further provided for notice to the Postmaster-General of any work to be done within ten yards of any telegraphic line. It also provided "for the purposes of this section a telegraphic line of the Postmaster-General shall be deemed to be injuriously affected by an act or work if telegraphic communication by means of such line is, whether through induction or otherwise, in any manner affected by such act or work or by any use made of such work." By the Telegraph Act, 1878, s. 2, the expression "telegraphic line" includes anything whatsoever used for maintaining telegraphic communication.

The Provisional Order did not contain a "No-Nuisance" clause.

The corporation's tramway was opened for traffic in 1891. It was worked by the defendant, a contractor-engineer employed by the Thomson-Houston International Electric Company, under an agreement between himself and the corporation whereby, *inter alia*, he undertook to provide the cars, rolling stock and plant necessary for working the tramways on the system of electrical traction adopted by the Thomson-Houston International Electric

Company, the defendant being responsible for all damage arising out of accidents or injuries in consequence of the working of the tramway. The written consent of the Board of Trade to the use of electrical power on the tramway was duly given, but this consent did not specify the particular method to be used. The Thomson-Houston system of electrical motive power adopted by the defendant was what was commonly known as the "single-trolley system," which consisted of a single overhead conducting wire connected with the tramcar by a trolley and line carrying the electric current to the car, which current operated a motor or motors on the car causing it to travel, the current returning by the rails and by an uninsulated copper conductor running under the roadway parallel to the rails and connected with each rail. The National Telephone Company complained that the effect of the working of the tramway was to cause such an electrical disturbance to their telephone wires as to render them practically useless, and by their action they sought an injunction to restrain the defendant from using the tramway in such a manner as to occasion a nuisance to them as owners or users of telephone lines and electric circuits within the borough, or as the owners or users of the telephone exchange system established in the borough, or in such a manner as to injure, disturb or interfere with the property or business of the company.

*National  
Telephone Co.  
v. Baker—  
contd.*

After the action had been set down for trial, KEKEWICH, J., with the consent of both parties, directed Mr. Macrory, Q.C., to proceed to Leeds to ascertain by inquiry and experiment in the presence of representatives on each side, and to report to the Court how far, if at all, the plaintiffs' telephone system had been interfered with by the defendant's tramways, with liberty to employ an assistant. Mr. Macrory accordingly visited Leeds with Mr. Henry H. Cunynghame (now C.B., and of the Home Office), barrister-at-law, as his assistant, and conducted a series of experiments there in the presence of representatives on each side. He reported as follows: "That the plaintiffs' telephone system is seriously interfered with by the works of the defendant. In some cases the disturbance is so great as to render speech quite inaudible. By 'inaudible' I mean that, though the sound of the speaker's voice may be heard, the words being transmitted are entirely unintelligible. In other cases speech was to some

*National  
Telephone Co.  
v. Baker—  
contd.*

extent audible, but an effort on the part of the listener was required to distinguish the words being transmitted, and there cannot be a doubt but that the effect produced by the working of the defendant's tramcars and line is such as greatly to interfere with the efficiency of the telephone by creating noise, which in all cases impairs, and in some cases entirely destroys, the power of transmitting speech." The disturbances were stated to consist sometimes of a buzzing or whirring noise; sometimes the noise assumed a uniform character like the rushing of water from a tap; while at other times it was similar to a musical note rising or falling, or to the sighing of the wind through trees."

When the action came on for trial, many English and American electricians of eminence were called as witnesses on either side as to the various systems of supplying electrical power for tramway purposes. The learned Judge held upon this point that the weight of evidence was in favour of the system used by the defendant, and which had been largely in use in the United States of America.

From the evidence on both sides it appeared that the use by the telephone company of a "metallic return"—that is, of a second wire, unconnected with earth—to carry the current back would afford a complete cure for the disturbance complained of, though it was proved that nearly the whole of the company's telephone business throughout the country was carried on by means of the single-wire system.

In the course of his judgment, KEKEWICH, J., observed: "Assuming the action to be maintainable on the principle of *Fletcher v. Rylands* (1868), L. R. 3 H. L. 330, the defendants rely on two answers to the plaintiffs' claim. First, they say that the plaintiffs might, by an alteration of their system—that is, by the adoption of what is known as the 'metallic return'—prevent the disturbance complained of; and, secondly, they say that they (the defendants) are acting under statutory powers, and that if in the proper exercise of those powers they injure the plaintiffs they are free from blame. The first answer is, to my mind, without foundation. The man who complains of his land being thrown out of cultivation by the incursion of water escaping from his neighbour's reservoir must not be told that he has no right

of action, because if he had interposed a wall, or otherwise taken care to protect himself, the water would not have reached his land." With regard to the second answer of the defendants to the plaintiffs' claim, the learned Judge observed: "The defendants' authority is derived under a provisional order confirmed by Act of Parliament. . . . The defendants are expressly authorized to use electrical power, and the Legislature must be taken to have contemplated it, and to have condoned by anticipation any mischief arising from the reasonable use of such power." With regard to the "single-trolley" system employed by the defendant, the learned Judge observed: "My conclusion from the evidence is that the defendants' system is, on the whole, the best which practical science has yet discovered; but there is no occasion really to go as far as this. It is enough to say, and about this I entertain no doubt, that it is at least as good as any other . . ."

Joint Committee on Protective Clauses, 1893.

Shortly after the decision in the case of *The National Telephone Company v. Baker*, above referred to, a Joint Committee of the House of Lords and of the House of Commons (presided over by Viscount Cross) was appointed (May, 1893) "to consider and report whether the grant of statutory powers to use electricity ought to be qualified by any prohibition or restriction as to earth return circuits, or by any provisions as to leakage, induction or similar matters, and if so, in what cases and under what conditions. And if the Joint Committee are of opinion that any such prohibition, restriction or provision should be enforced to settle the necessary clauses."

Joint Committee on Electric Powers (Protective Clauses) 1893.

The following parties were represented before the Joint Committee:—

- (1.) The National Telephone Company.
- (2.) Railway Companies.
- (3.) Electric Tramway Companies and Electric Underground Railway Companies.
- (4.) Electric Lighting Companies.
- (5.) Municipal Corporations, England and Scotland.
- (6.) The London County Council.
- (7.) Tramway Institute of Great Britain and Ireland.
- (8.) Gas and Water Companies.
- (9.) Her Majesty's Postmaster-General.

Joint Com-  
mittee on  
Protective  
Clauses, 1893  
—*contd.*

It appeared in the course of the inquiry that in fifty-two instances up to the end of the previous Session the grant of statutory powers to supply electricity was qualified by the insertion of protective clauses. The clauses had not been uniform, and were known respectively as "The Plymouth Clause," "The West Metropolitan Clause," "The Wellingborough Clause," and "The Weston Clause." The Plymouth clause had been inserted in thirty-eight cases, the West Metropolitan clause in nine cases, the Wellingborough clause in two cases, and the Weston clause in three cases. The Plymouth clause is, for convenience of reference, here inserted. The others will be found in the Report of the Joint Committee, Parliamentary Paper 331 of 1893, pp. 8—10.

#### THE PLYMOUTH CLAUSE.

For the protection of the National Telephone Company, Limited, its successors and assigns (in this section called "the Telephone Company") the following provisions shall have effect, in the event of any tramways of the company being worked by electricity otherwise than by electrical power carried along with the carriages (that is to say):—

(1.) The company shall so construct their electric circuits and other works of all descriptions, and shall so work their tramway in all respects as to prevent any injurious interference by induction or otherwise with the electric circuits from time to time, used or intended to be used by the telephone company for the purpose of telephonic communication or with the currents in such circuits.

Provided that, as regards electric circuits erected or laid down by the telephone company after the construction of the works of the company, this sub-section shall only apply if reasonable and proper precautions have been taken in the erection or laying down of such circuits, and if they have not been erected or laid down in unreasonably close proximity to the lines or works of the company.

(2.) Seven days before commencing to lay down any electric line, or to supply electricity through any electric line in any manner whereby the work of telephonic communication through any wires or lines belonging to the telephone company and lawfully laid down or placed in any position by them may be injuriously affected, the company shall, unless otherwise agreed with the telephone company, give to that company notice in writing specifying the course, nature and gauge of such electric line, and the amount and nature of the current intended to be sent along the same, and the company shall conform with such reasonable requirements as may from time to time be made by the telephone company for the purpose of preventing the communication through such wires or lines from being injuriously affected as aforesaid.

(3.) If any difference arises between the company and the telephone company with respect to anything in this section contained such difference shall be determined by the Board of Trade, whose decision shall be final, and ss. 30 to 32, both inclusive, of the Regulation of Railways Act, 1868, shall apply in like manner as if the company and the telephone company were companies within the meaning of that Act.

Joint Committee on Protective Clauses, 1893  
—*contd.*

(4.) Nothing in this section shall apply to repairs or renewals of any electric line so long as the course, nature and gauge of such electric line and the amount and nature of the current sent along the same are not altered.

The following tabular statement, which was put in before the Committee, shows in chronological order the fifty-two instances above referred to:—

Date.	Name of Case.	Form of Clause inserted.	Remarks.
1889.	*Lea Bridge . . . .	P.	Agreed with promoters.
	*Plymouth . . . .	P.	} Contested, Lord Belper's Committee.
	*South Staffordshire . .	P.	
	*Oldham . . . .	P.	} Agreed with promoters after petitions lodged, and after negotiations with Board of Trade.
	*Lancaster . . . .	P.	
	*Gosport and Alverstoke .	P.	
1890.	†City and South London	P.	
			Agreed with promoters. Contested subsequently — Lord Belper's Committee—on attempt of promoters to withdraw from agreement: Clause retained.
	*Glasgow District . .	P.	} Agreed with promoters.
	*Penzance and Newlyn .	P.	
	*North Metropolitan .	P.	
	†Wellingborough . .	Wel.	Contested, Lord Kensington's Committee: Altered clause inserted. Further contest. Sir John Kenaway's Committee: Clause retained.
	†Terrington and Walpole	Wel.	Followed Wellingborough by agreement with promoters.
	*Weston-super-Mare .	West.	Contested, Sir Charles Dalrymple's Committee: Altered clause inserted. Further contest, Lord Romilly's Committee: Clause retained.
	†Drypool and Marfleet .	West.	Contested, Sir Charles Dalrymple's Committee: Weston clause inserted.
	†Lea Bridge . . . .	P.	} Agreed with promoters.
	*Poole and Bournemouth .	P.	
	*Tong Local Board . .	P.	
	*Bradford District . .	P.	
1891.	*Central London . .	P.	} Agreed with promoters.
	*Glasgow Corporation .	P.	
	†Bolton Corporation .	P.	
	†Southwark and Deptford	P.	

\* First application for electrical powers.

† Extension of existing electrical powers.

§ Extension of time only.

Joint Com-  
mittee on  
Protective  
Clauses, 1893  
—*contd.*

Date.	Name of Case.	Form of Clause inserted.	Remarks.
1891.	§Folkestone, Sandgate, etc.	—	Locus contested and allowed. Con- tested, Sir Charles Dorington's Committee: Clause settled by Committee, refused by Telephone Company.
	§West Metropolitan	W.M.	Contested, Hon. W. H. James' Com- mittee: Altered clause settled.
	*Bradford and Wyke	P.	} Agreed with promoters.
	*Blackburn Corporation.	P.	
	*Liverpool Corporation	P.	
	†Birmingham Central	W.M.	} Both contested, Duke of West- minster's Committee: West Metropolitan clause inserted. Birmingham Order subsequently withdrawn.
	*Bristol	W.M.	
1892.	†Weston-super-Mare	West.	} Incorporated from Act of 1890.
	†Central London	P.	
	†City and South London	P.	
	*Waterloo and City	P.	} Agreed with promoters.
	*Hampstead, St. Pancras and Charing Cross.	P.	
	*Dundee Corporation	P.	
	†Newcastle-on-Tyne Cor- poration.	P.	
	*Newport Corporation	P.	
	*Liverpool	P.	
	*Baker Street and Water- loo.	P.	
	*Liverpool Overhead Rail- way.	P.	
	*Northampton	W.M.	
	§Oxford and Aylesbury	W.M.	
	†Edinburgh Street.	P.	} Locus contested, but allowed by Lord Ducie's Committee: Clause then agreed with promoters. Further contest on petition of Edinburgh Corporation in 2nd House. Hon. Tatton Egerton's Committee: Clause retained.
1893.	*Govan Burgh	P.	
	*Blackpool, St. Annes, etc.	W.M.	} Agreed with promoters.
	*Bedford and Kempston	W.M.	
	*Great Yarmouth	W.M.	} Incorporated from Acts of 1891.
	†Glasgow Corporation	P.	
	†Bolton Corporation	P.	
	†Salford Corporation	P.	
	*Dublin Southern District	W.M.	Contested, Lord Cadogan's Com- mittee: Tramway Clauses sub- sequently withdrawn from Bill.
			Agreed with promoters. Contested subsequently—Lord Strafford's Committee—on attempt of pro- moters to withdraw from agree- ment: Clause retained.
	*Clapham Junction and Paddington.	P.	} Agreed with promoters. Bills sub- sequently rejected on other oppositions.
	*Edgware Road and Vic- toria.	P.	

\* First application for electrical powers.

† Extension of existing electrical powers.

§ Extension of time only.



## SUMMARY.

(P.)	Plymouth clause inserted in . . . .	38 cases.
(W.M.)	West Metropolitan clause inserted in . . . .	9 „
(Wel.)	Wellingborough clause inserted in . . . .	2 „
(West.)	Weston clause inserted in . . . .	3 „

52

Joint Com-  
mittee on  
Protective  
Clauses, 1893  
—*contd.*

The following extracts from the evidence of the late Sir COURTENAY BOYLE, K.C.B., explains the position which the Joint Committee had to deal with:—

Evidence of  
SIR C. BOYLE.

16. *Chairman* : Perhaps you can now give us in the rough what the arguments of the telephone companies for protection come to?—The telephone companies use the earth for their return circuit. Generally speaking, the telephone companies and the telegraph companies use very small currents at very low pressure. The telephone companies, not for the purpose of ringing the bell, because that is done by the telegraph, but for the purpose of the current used in conversation, use a very small current indeed, something like a millionth part of an ampère, and the pressure is a fraction of a volt. Speaking generally, the telegraph companies use a current of something like (I am using very round figures now) from a hundredth part to a quarter of an ampère, I understand, and a pressure of from 10 to 50 volts. Now, the electric lighting companies use a current something like from 100 to 5,000 ampères at a pressure of from 100 to 10,000 volts; so the Committee will see that as regards the electric lighting companies, and similarly as regards to some extent the tramway companies, although there the voltage is not so high, the current used by the tramway companies and electric lighting companies is very large indeed, as compared with the current used by the telegraph and telephone companies. Therefore a phrase has been used over and over again, that in the matter of electrical disturbance, the electric lighting and tramway companies are the wolf, and the telegraph and telephone companies are the lamb. It has been said that it is not desirable to protect the wolf from the lamb, as the lamb cannot harm the wolf. It might be possible to use another simile and to say that sometimes it is necessary to protect the elephant from the flea.

17. How does this swift current, as used by the lighting companies and other companies of the same kind, affect the telephones; in what way?—It affects them, generally speaking, by leakage, and efforts are made to prevent leakage in the case of tramway companies using electricity for traction purposes. They themselves try to prevent any earthing. They try to confine their circuit into its conduit and return so that it shall be entirely retained in a metallic circuit; but practically it has been found there is no such word as “impossible,” but that it is very difficult to do this. Leakage takes place. On the

Evidence of  
SIR C. BOYLE,  
1893—*contd.*

City and South London Subway, which is a railway worked by electricity, I am not maligning them when I say that they find it impossible to prevent leakage of their current to earth. There are several things which may lead to earthing. Insulation may become abraded—that occurs with electric lighting companies very often—or metallic conductors may become damp. A hundred and fifty things may set up the earth. But, when the earth is set up, there becomes electrical disturbance in the neighbourhood—an electrical disturbance which may extend for a very considerable distance. I am told that the disturbance follows the mathematical law, that the effect varies inversely with the square of the distance. Whether that is so or not you will hear from scientific witnesses. But there can be no doubt whatever, that either by leakage or by induction the tramways, when they use electricity, do, and the electrical lighting companies may, inadvertently cause electrical disturbance in the vicinity of their circuits.

18. To such an extent as to interfere with the telephones?—That disturbance does cause material interference (I do not think this point will be denied by anybody) with the very delicate and sensitive instruments used by the telephone companies, and by the telegraph companies.

19. You used the words “leakage and induction”; will you explain to the Committee the difference between those two terms?—Leakage occurs when the insulation is not sufficiently protected; but even in instances where insulation is good there is induction. If two conductors are close to each other, and fairly well insulated, there comes induction between one and the other. Exactly when induction occurs, and when it does not, you had better get from one of the scientific witnesses.

20. What is the position of the telephone companies as regards metallic circuits?—In some of their systems, I think, it will not be denied that a metallic return circuit is used. It does occur; but the telephone companies plead not to be under the obligation to make, at a very considerable expense to themselves, a metallic return over the whole of their system. They plead to be allowed to use the earth. Having got the earth and having used the earth, they plead to be allowed to use the earth by prescriptive as well as by inherent right.

21. And I suppose the tramways say the same?—The tramway companies say, “Why is the earth to belong entirely to the telephone companies; why may not we use it?”

22. What is the position of the tramway companies and the electric lighting companies as regards metallic circuits?—As regards electric lighting, we have absolutely forbidden, by our Provisional Orders (for there are no electrical lighting Bills (*a*); it is all done by Provisional

---

(*a*) This was so at the time this evidence was given. Since then procedure by Bill has been resorted to in many instances—*e.g.*, where it is necessary to obtain compulsory powers to take land for generating stations. See *ante*, pp. 19 and 61—70.

Orders) the use of the earth for the return circuit, except with special sanction.

23. You have driven them to the metallic circuit?—We have driven them to the metallic circuit; and that position has been accepted with a certain amount of compliance on their behalf. As regards tramway companies, our regulations are framed principally, not in the interest of the public owning the earth, but in the interest of the public travelling along the line. We endeavour to prevent leakage, but it is not absolutely possible to do so.

The Committee reported in July, 1893 (No. 331 of 1893). After referring to the evidence given and the parties represented, the Report proceeds as follows:—

Report of  
Joint Com-  
mittee on  
Protective  
Clauses, 1893.

“The Committee have heard all the witnesses tendered by the several parties, and have agreed upon the following Clause, to be inserted in all Bills and Provisional Orders which authorise the Undertakers, other than Electric Lighting Undertakers, to use large electric currents, viz. :—

#### “CLAUSE

“To be inserted in all **BILLS** and **PROVISIONAL ORDERS** which authorise any Company, Corporation, or Person, collectively referred to as ‘the Undertakers,’ to use larger Electric Currents for other than Electric Lighting purposes.

Clause  
suggested by  
Joint Com-  
mittee of  
1893.

*(Some modifications of Form may be required to meet the circumstances of particular cases.)*

(1.) The Undertakers shall, in the use of electric power under the provisions of this Act [Order], employ either insulated returns or uninsulated metallic returns of low resistance. [This Clause not to apply in the case of railways, tramways, or tramroads in which the motive power is entirely self-contained.]

(2.) The Undertakers shall take all reasonable precautions in constructing, placing, and maintaining their electric lines and circuits, and other works of all descriptions, and also in working their undertaking so as not injuriously to affect, by fusion or electrolytic action, any gas or water pipes, or other metallic pipes, structures, or substances.

(3.) The exercise of the powers by this Act [Order] conferred with respect to the use of electric power, shall be subject to the regulations set forth in the Schedule to this Act [Order], and to any regulations which may be added thereto or substituted therefor, respectively, by any order which the Board of Trade may, and which they are hereby empowered to make from time to time, as or when they may think fit, for regulating the employment of insulated returns or of

Report of  
Joint Com-  
mittee on  
Protective  
Clauses, 1893  
—*contd.*

“uninsulated metallic returns of low resistance, for preventing fusion or injurious electrolytic action of or on gas or water pipes, or other metallic pipes, structures, or substances, and for minimising, as far as is reasonably practicable, injurious interference with the electric wires, lines, and apparatus of other parties and the currents therein, whether such lines do or do not use the earth as a return.

(4.) The Undertakers using electric power contrary to the provisions of this Act [Order], or to any of the regulations set forth in the Schedule to this Act [Order], or to any regulation added thereto or substituted therefor by any order made by the Board of Trade under the authority of this Act [Order], shall, for every such offence be subject to a penalty not exceeding *ten* pounds, and also in the case of a continuing offence to a further penalty not exceeding *five* pounds for every day during which such offence continues after conviction thereof: Provided always, that, whether any such penalty has been recovered or not, the Board of Trade, in case in their opinion the Undertakers in the use of electric power under the authority of this Act [Order] have made default in complying with the provisions of this Act [Order], or with any of the regulations set forth in the Schedule to this Act [Order], or with any regulation which may have been added thereto or substituted therefor as aforesaid, may by order direct the Undertakers to cease to use electric power, and thereupon the Undertakers shall cease to use electric power, and shall not again use the same, unless with the authority of the Board of Trade, and in every such case the Board of Trade shall make a special report to Parliament notifying the making of such order.

(5.) The Undertakers shall take all reasonable and proper precautions in constructing, placing, and maintaining their electric lines, circuits, and other works, of any description, and in using their electric lines, circuits, and other works so as not injuriously to interfere with the working of any wire, line, or apparatus, from time to time used for the purpose of transmitting electric power, or of telegraphic, telephonic, or electric signalling communication, or the currents in such wire, line, or apparatus. Provided always that the Undertakers shall be deemed to take all such reasonable and proper precautions as aforesaid, if and so long as they adopt and employ, at the option of the Undertakers, either such insulated returns or such uninsulated metallic returns of low resistance, and such other means of preventing injurious interference with the electric wires, lines, and apparatus of other parties, and the currents therein, as the Board of Trade shall direct, and in giving such directions the Board shall have regard to the expense involved, and to the effect thereof upon the commercial prospects of the undertaking. Provided also that at the expiration of        years from the passing of this Act [Order] nothing in this sub-section shall operate to give any

"right of action in respect of, or to protect any electric wires, lines, or apparatus, or the currents therein, unless in the construction, erection, maintaining, and working of such wires, lines, and apparatus, all reasonable and proper precautions, including the use of an insulated return, have been taken to prevent injurious interference therewith, and with the currents therein, by or from other electric currents. If any difference arises between the Undertakers and any other party with respect to anything in this sub-section contained, such difference shall, unless the parties otherwise agree, be determined by the Board of Trade, or at the option of the Board by an arbitrator to be appointed by the Board; and the costs of such determination shall be in the discretion of the Board, or of the arbitrator, as the case may be.

Report of  
Joint Com-  
mittee on  
Protective  
Clauses, 1893  
—*contd.*

(6.) Nothing in this section shall apply to the use of any electric line, circuit, or work of any company, corporation, or person authorised by Act of Parliament, or Provisional Order confirmed by Parliament, to supply energy for electric lighting purposes, so far as such use is limited to such purposes" (b).

The Joint Committee also agreed upon the following Resolutions in the nature of Recommendations:—

Recommendations of Joint Committee of 1893.

(1.) "The Committee, having regard to the evidence before them, are of opinion that it is not in the present state of electrical science to the interest of the public to insist upon electrical tramways using an insulated return conductor, and that such insistence would retard the development of electric traction.

(2.) The chief objections which have been urged before the Committee to an uninsulated return conductor are, first, the interference by leakage and induction with telephones; secondly, the interference by leakage and induction with railway signals; thirdly, the damage to systems of gas and water pipes by the action of leakage currents.

(3.) They are of opinion that the best known means of overcoming the first of these disturbances, is by providing an insulated return conductor for the telephones, and they have the less hesitation in recommending this course as the evidence shows that telephone construction is already tending in this direction, and that better results are secured to the public by the use of a twisted metallic circuit insulated entirely from the earth.

(4.) The second objection deserves serious consideration on account of the danger to the public, but the Committee are of opinion that the disturbance may be remedied at comparatively small expense by the adoption of an insulated metallic return by the railway companies.

(5.) They consider that, although electric tramway and electric railway companies should be allowed to use the wheels of carriages and the rails to complete the electric circuit, the currents should be

---

(b) For the form of the Model Clause as now in use, see *post*, p. 368.

Report of  
Joint Com-  
mittee on  
Protective  
Clauses, 1893  
—*contd.*

“produced and used in such a manner as to mitigate as far as is practicable any injurious effect to telephonic communication.

(6.) The Committee are of opinion that it is desirable in every way to facilitate the use of complete insulated metallic circuits for telephones, and for this end they recommend that statutory powers be granted enabling telephone undertakers to lay their wires underground.

(7.) The danger from fusion or electrolytic action appears to the Committee to have arisen from a faulty system of constructing electric tramways, and they are of opinion that it can be reduced by improved methods of construction so as to be practically negligible.

(8.) The Committee therefore recommend that the Board of Trade shall, in virtue of the powers to be conferred upon them by each Act or Order, make regulations to secure the best system of working electric tramways and railways, having regard to the expense involved by the carrying out of such regulations, and to the effect thereof upon the commercial prospects of the undertaking. The regulations to provide, *inter alia*,—

(a.) That a return conductor, if in contact with the ground, shall be of such section and resistance as to have no difference of potential sufficient to set up injurious leakage currents in the earth.

(b.) That, both with regard to the structure of the line and to the method of generation and use of the electrical current, everything shall be maintained up to the standard required by the Board of Trade; but, if the regulations are altered after the use of electric power on the line has been sanctioned, the Undertakers shall not be required to alter the structure or method of working of the line to conform to the more recent regulations, except for the public safety, or unless it shall be proved to the satisfaction of the Board of Trade that any system of metallic pipes or structures is being substantially injured by the action of electricity escaping from the conductors, or for purposes other than public safety or injury to pipes or structures which the Board may think right, provided that the alterations do not in such last case cause substantial additional expenditure.

(c.) That all such electrical tests shall be applied to the line by the Undertakers as the Board of Trade may think necessary, and that a record of these tests shall be kept for the information of the Board of Trade.

(d.) That the Board of Trade shall have all reasonable facilities for making any tests they may think necessary, in addition to those recorded by the Undertakers to enable them to insure the maintenance of satisfactory conditions.

(9.) That the Committee regards with apprehension a large extension of the system of overhead wires in crowded centres.

(10.) It appears to the Committee to be just that Undertakers proposing to use large currents should be required to give ample

notice to those using small currents to enable them to protect themselves by insulation, and that with this view, and in reference to the Clause agreed upon, a period of two years may fairly be allowed to telephone and telegraph companies from the date of the passing of any Act [Order]."

In 1898 another Joint Committee of the House of Lords and the House of Commons was appointed for the purpose of considering and reporting whether power should be given in any cases for acquiring any land compulsorily for generating stations, and on the subject of nuisance, etc. (For the full terms of the reference to the Committee and their Report, see *ante*, p. 55).

Joint Committee on Electrical Energy (Generating Stations and Supply), 1898.

This Joint Committee was also presided over by Viscount Cross. In their Report (Parliamentary Paper, 1898, No. 218) the Committee, under the head of "Provisional Orders," say:—

"The ordinary clause which forbids any connection with the earth, except with the approval of the Board of Trade and the concurrence of the Postmaster-General, should be inserted in every case.

"As to protection of telegraphs and telephones, the clauses now inserted in Provisional Orders seem to be sufficient in all ordinary cases. And regulations to protect the public can be made by the Board of Trade under s. 6 of the Act of 1882.

"The clauses which protect gas and water pipes have worked satisfactorily, and should be continued, but the Committee would direct attention to the observations of Mr. Preece as regards the difficulty arising from the working of tramways by trolley wires: His suggestion as to a strong 'control clause' should be carefully considered." (c)

---

(c) The evidence of Mr. Preece (now Sir William H. Preece, K.C.B., F.R.S.) above referred to appears to be the following:—

1980.—Are you satisfied with the clause which the last Joint Committee put in? —Yes, and it has been carried out in all subsequent Acts. We are quite satisfied with its working, and the only case where we suffer at all is in the case of the City and South London Railway, and the Liverpool Railway, which were exempt from that clause, because they were constructed prior to the meeting of your Committee.

1981.—Do you think that that clause ought to be introduced in all Bills?—Yes, certainly.

1982.—Would that clause protect all that is necessary as to water and gas pipes? —Yes, to a certain extent. There is one very serious difficulty that has not up to the present moment been entirely removed, and that is in the working of the tramways by the trolley wires, as they are called. There are these loose currents running about wildly, affecting water pipes and gas pipes, and they have in three or four instances affected very seriously the lead-covered cables, which we are using so much in England now for telegraphic and telephonic purposes. The remedy for this has not been applied yet. There is no doubt whatever, when a stringent clause appointing proper control, with the inspection of the Board of

E.L.

A A

London  
County Tram-  
ways (No. 2)  
Bill, 1900.

H.C.

H.L.

As to injury  
to pipes, etc.,  
by electro-  
lytic action.

In the Session of 1900 the London County Tramways (No. 2) Bill (which afterwards passed into law as the London County Tramways (Electrical Power) Act, 1900 (63 & 64 Vict. ch. ccxxxviii.)) was opposed before a Committee of the House of Commons (Sir SAMUEL HOARE, CHAIRMAN) by the South Metropolitan Gas Company and the Lambeth Water Company. The evidence on the part of the London County Council showed that while power was reserved to adopt the overhead trolley system, the best method was considered to be the conduit system with insulated return. This system had insulated conductors throughout, and did not use the rails or earth as a return. The possibility of electrolysis due to leakage currents was, it was contended, thus obviated. The opponents called expert evidence (Mr. James Swinburne, M.I.E.E., and Mr. C. C. Carpenter, chief engineer of the South Metropolitan Gas Company) on the subject of damage which it was anticipated might be done to gas and water pipes from electrolytic action. In finding the preamble proved, the Chairman is reported to have said: "In reference to the petitions of the gas and water companies, no evidence has been placed before the Committee as to any cases of loss in this country sustained by fusion of, or electrolytic action on, gas and water pipes." (*Journal of Gas Lighting*, March 27th, 1900, p. 812.) In the House of Lords the Bill was again opposed, and came before a Committee (Earl of CAMPERDOWN, CHAIRMAN). The Committee having decided that the Bill might proceed, a clause was brought up on behalf of the petitioners asking for compensation to any company or person suffering loss or damage by reason of fusion or electrolytic action. The room having been cleared, the Chairman, on re-admission of the public, announced that the Committee had decided to admit the principle of the clause. In the result a clause was inserted to the following effect:—

5. If it be proved that any injury or damage to any gas or water pipes or other metallic pipes, structures, or substances of any gas or water

Trade and the attention which has been given to it by their expert, is inserted. I think we may say that those disturbances will ultimately be removed also.

1983.—I suppose there is danger from explosion of gas and water pipes arising from that?—Yes; the pipes get pitted and punctured, and in some instances water has escaped, and in other cases gas has escaped and caused explosions.

See further on this subject the evidence of Sir William Preece in the case of the London United Tramways Bill of 1901, *Electrician*, June 28th, 1901, p. 367.



company shall have resulted from fusion or electrolytic action caused by any currents generated or used by the council for the purpose of electric traction under this Act nothing in this Act shall relieve the council from any liability to make compensation for any such injury or damage which would have existed but for the passing of this Act. (*Journal of Gas Lighting*, August 14th, 1900, p. 414.)

On May 8th, 1900, the South-Eastern Metropolitan Tramways Company's Bill came before a Select Committee of the House of Commons (Colonel COTTON-JODRELL, CHAIRMAN). By the Bill it was proposed to substitute electric for horse traction on the tramway running from Greenwich to Catford. It was opposed by the South Metropolitan Gas Company, on the ground of alleged danger from electrolysis to their mains and pipes. The Bill contained the usual Model Clause. After expert evidence had been called (Sir William Preece, K.C.B., F.R.S., for the promoters, and Mr. C. C. Carpenter, chief engineer to the gas company, Mr. W. R. Cooper, and Mr. James Swinburne, M.I.E.E., for the opponents), the Committee found the preamble proved, and did not insert any special clause for the protection of the gas company with regard to electrolytic action. Special clauses were, however, inserted for the protection of the gas company and the Kent Waterworks Company providing that any authorised works which would occasion any interference with the mains, pipes, works, etc., of the company shall, if the company so desire, be executed by themselves at the reasonable expense of the company, arbitration in case of difference being provided for. (d) See ss. 15 and 16 of the Act (63 & 64 Vict. ch. cxlvii.) (*Electrician*, May 11th, 1900, p. 107; *Journal of Gas Lighting*, May 22nd, 1900, p. 1,886). The Committee also rejected a proposal on behalf of a local authority interested to restrict the company to the use of the conduit system. (*Electrician*, May 11th, 1900, p. 107.) In the House of Lords the Bill went ultimately before the Lord Chairman as an unopposed Bill (*Electrician*, July 18th, 1900,

South-  
Eastern  
Metropolitan  
Tramways  
Bill, 1900.  
H.C.

---

(d) Clauses such as those above referred to are of common occurrence both in Acts and provisional orders. See, e.g., Wrexham District Tramways Order, 1899 (confirmed by 62 & 63 Vict. ch. cclxiv.), s. 12; Croydon Corporation Act, 1900, s. 53; Bexley Tramways Act, 1901, s. 33; Bournemouth Corporation Act, 1901, s. 6; London County Council (Tramways and Improvements) Act, 1901, ss. 48 and 49; London United Tramways Act, 1902, s. 17; London County Council (Subways and Tramways) Act, 1902, s. 21. There are many other precedents.

p. 455), and passed without any special clause relating to electrolytic action.

Croydon  
Corporation  
Bill, 1900.  
H.C.

On June 19th, 1900, a Bill promoted by the Croydon Corporation came before the Police and Sanitary Committee of the House of Commons (Lord E. FITZMAURICE, CHAIRMAN). The Croydon tramways had originally been constructed by the corporation, and had been leased to a company. The corporation had re-acquired the same by agreement with the company. By the present Bill it was, *inter alia*, proposed to authorise the use of electrical power on the tramways, and to empower the corporation to re-construct all or some of the lines for that purpose, and also to construct additional tramways. The Lambeth Water Company opposed on the ground of danger to their mains and pipes from electrolytic action. The Bill contained the usual Model Clause. The Committee passed the preamble without inserting any special clause for the protection of the water company. (*Electrician*, June 22nd, 1900, p. 389.) The Bill ultimately became law without any such clause (68 & 64 Vict. ch. ccxxix.).

South Wales  
Electrical  
Power Dis-  
tribution  
Company  
Act, 1900.  
For protec-  
tion of Ponty-  
pool Gas and  
Water  
Company,  
Swansea Gas  
Light  
Company, and  
Aberdare and  
Aberaman  
Consumers  
Gas Company.

The South Wales Electrical Power Distribution Company Act, 1900, contains the following clause, which it is understood was inserted by agreement:—

52. The following provisions for the protection of the Pontypool Gas and Water Company, the Swansea Gas Light Company, and the Aberdare and Aberaman Consumers Gas Company (in this section called "the three companies") shall, in addition to any other provisions as to conduits, main carriers, sewers, drains, or water pipes contained in any Act incorporated with this Act unless otherwise agreed between the three companies and the Company be observed and have effect (that is to say):

The Company shall make full compensation to anyone of the three companies for any loss or damage which may occur to their mains, pipes, and apparatus by fusion or electrolytic action caused by the exercise of any of the powers by this Act conferred upon the Company.

Sheffield  
Corporation  
Bill, 1901.

By the Sheffield Corporation Tramways Act, 1896, power was conferred upon the Sheffield Corporation to work and use certain tramways theretofore leased by them. The Act contained the Model Clause (s. 9). By the Sheffield Corporation (Streets and Tramways) Act, 1897, the corporation were authorised to construct certain additional tramways and to enter into agreements with the Sheffield Electric Light and Power Company, Limited, for the supply to the corporation by the company

of electrical energy for working the tramways (s. 37), and also to convert the then existing tramways so as to adapt the same for working by electrical or other mechanical power (s. 29). By s. 22 the additional tramways were to form part of the tramway undertaking of the corporation. By the Sheffield Corporation Act, 1900, the corporation were authorised to construct certain additional tramways (s. 72), which were to form part of the tramway undertaking of the corporation (s. 78). In the Session of 1901 the corporation promoted a Bill whereby they sought power to construct certain additional tramways, which were also to form part of the tramway undertaking of the corporation. By Clause 14 of the Bill it was proposed to be enacted that all the provisions and regulations of the Sheffield Tramways Act, 1896 (as amended by the Acts of 1897 and 1900), which relate to the existing or authorised tramways of the corporation should extend and apply *mutatis mutandis* to and in relation to the tramways by that Act authorised. The water supply was in the hands of the corporation, but the gas supply was in the hands of the Sheffield United Gas Company. The Gas Company opposed the Bill, which, on March 21st, 1901, came before a Committee of the House of Lords (Lord NEWTON, <sup>H.L.</sup> CHAIRMAN). The Gas Company sought the insertion of a protection clause against damage which might be caused through electrolytic action, and they relied on the decision of Lord Camperdown's Committee in 1900. (e) In the result the Committee inserted the following proviso to Clause 14:—

Sheffield  
Corporation  
Bill, 1901—  
*contd.*

“Provided that notwithstanding anything contained in the said Acts or this Act, if it be proved that any injury or damage to any mains, pipes, or apparatus of the Sheffield United Gaslight Company shall have resulted from fusion or electrolytic action caused by any currents generated or used for the purpose of electric traction on any of the tramways for the time being belonging to the Corporation, nothing in the said Acts or this Act shall relieve the Corporation from any liability to make compensation for such injury or damage which would have existed but for the passing of the said Acts and this Act.” (*Electrician*, March 22nd, 1901, p. 886; *Jl. of G. L.*, March 25th, 1901, p. 829.)

---

(e) The Sheffield clause (*supra*) is often referred to as if it were the earliest precedent for a protective clause of this character, but the first precedent was that of Lord Camperdown's Committee in the Session of 1900, as stated above. See *ante*, p. 354.

Bexley Tram-  
ways Bill,  
1901.

By the Bexley Tramways Bill in the Session of 1901 it was proposed to construct a tramway of three miles in length, to be worked by electricity on the overhead system, to form a connection with the existing line running from Greenwich to Woolwich. The Bill was promoted by the Bexley Urban District Council, who had a Provisional Order for electric lighting and the supply of electric energy throughout their district. The Bill was opposed by the South Metropolitan Gas Company and the Kent Water Company, both of which companies desired the insertion of a provision making the Bexley Council responsible for any damage which might be done to their pipes through electrolytic action. For the promoters expert evidence (Mr. R. A. Dawbarn, of Mordey and Dawbarn, consulting electrical engineers, and Mr. H. M. Sayers, electrical engineer to the British Electric Traction Company) was given as to the sufficiency of the Board of Trade Regulations to prevent damage from electrolytic action. For the opponents Mr. (now Sir) George Livesey, M.Inst.C.E., Professor John Perry, F.R.S., Professor Dewar, F.R.S., and Professor Ayrton, F.R.S., and Mr. Morris (chief engineer to the Kent Water Company) expressed the contrary opinion, and it was said that 1.5 volts (*f*) was not a safe limit to take below which electrolysis would not occur. After the evidence on behalf of the promoters and opponents respectively, Mr. A. P. TROTTER, Electrical Adviser to the Board of Trade, attended at the request of the Committee. He stated, in answer to the Chairman, that under the Board of Trade Regulations no cases of electrolysis had been shown to have occurred, and he added that the Regulations could be amended if experience showed the necessity for amendment. The late Sir COURTENAY BOYLE, K.C.B., then Permanent Secretary to the Board of Trade, also attended at the request of the Committee. He stated, in answer to the Chairman, that the Regulations of the Board of Trade were based on the advice of the most capable men in the United Kingdom, and that the Board hoped they were sufficient protection of the interests involved. His view was that electrolysis might be going on, and might be felt in the future, but that there was at present

---

(*f*) The figure of  $1\frac{1}{2}$  volts is another way of stating the pressure of the current which can be reversed by interposing a battery of 3 Leclanché cells. See Tramway Regulation 6 (ii.) at *post*, p. 385.

no proof of it. He said the Board of Trade had received a few weeks ago a deputation on the subject from the gas and water companies, but that the Board were waiting for evidence of damage. Since the gas and water companies were innocent users of the road and could not, like the telephone companies, protect themselves, they had a great claim for consideration. The Committee (Mr. SEALE-HAYNE, CHAIRMAN), after deliberation, declared the preamble proved without requiring the insertion of any special clause on the subject of electrolytic action. (*Electrician*, May 10th, 1901, p. 101; *Jl. of G. L.* May 21st, 1901, p. 1,382.) In the House of Lords (Lord CLONBROCK, CHAIRMAN), the South Metropolitan Gas Company and the Kent Water Company again opposed the Bill and raised the same question, but the Committee intimated that their contentions would not receive any favourable consideration, whereupon their counsel withdrew. (*Jl. of G. L.*, July 9th, 1901, p. 98.)

Bexley  
Tramways  
Bill, 1901—  
*contd.*

H.C.

H.L.

The Light Railway Commissioners made a Provisional Order authorising the construction of certain Light Railways in the City of Wakefield and the adjoining townships, to be worked by electrical power. The Wakefield Gas Company appealed to the Board of Trade against the confirmation of the Order, and were heard before the late Sir COURTENAY BOYLE, K.C.B., then Permanent Secretary, at the Board of Trade on May 10th, 1901. The company asked for the insertion of a protective clause such as had been given in the Sheffield case. Expert evidence (Professor W. E. Ayerton, F.R.S., and Mr. C. H. Wordingham, M.I.E.E.) was called on behalf of the gas company, and the opinion was expressed by them that there was no absolute security in the limit of  $1\frac{1}{2}$  volts imposed by the Board of Trade Regulations. At the close of the evidence, Sir Courtenay Boyle is reported to have said: "It was obviously desirable that the decision of the Board of Trade should not be given that day. Several Bills were before the Legislature, and if the Board of Trade put the Sheffield clause into the Order, that would be argued strongly before the Committees of the House. The Board would therefore reserve their decision on the whole question for the present." (*Journal of Gas Lighting*, May 21st, 1901, p. 1,399.) The decision of the Board of Trade was

Wakefield  
and District  
Light Rail-  
way Order,  
1901.

BOARD OF  
TRADE.

Wakefield  
Light  
Railway  
Order, 1901—  
*contd.*

communicated to the promoters by the following letter from  
Sir HERBERT JEKYLL:—

Board of Trade (Railway Department),  
7, Whitehall Gardens, S.W.  
August 18th, 1901.

*Wakefield and District Light Railway Order.*

Messrs. Stewart and Chalker, Wakefield.

Gentlemen,

With reference to your objections on behalf of the Wakefield Gas-light Company to the confirmation of the above-named Order, I am directed by the Board of Trade to state that, after carefully considering the circumstances of the case, and the balance of parliamentary precedents in the matter, they have come to the conclusion that sufficient cause has not been made out for the proposed amendment put forward by the Gas Company.

(Signed) HERBERT JEKYLL.

See *Journal of Gas Lighting*, September 10th, 1901, p. 652.

South  
Lancashire  
Tramways,  
1901.

In the same Session (1901) the South Lancashire Tramways Company promoted a Bill to obtain additional capital and power to construct other tramways in connection with their system authorised in the previous year. The mode of traction authorised was electric. The Bill came before a Committee of the House of Lords (Earl DUCIE, CHAIRMAN). The Bury and District Water Board and the Corporation of Salford opposed the Bill because of damage anticipated to water and gas mains and pipes from electrolytic action, and asked for the insertion of a clause to the effect that nothing in the Bill should relieve the company from liability to make compensation for any such injury or damage. The promoters called Mr. E. Manville, who gave evidence as to the sufficiency of the Board of Trade Regulations to prevent damage to pipes. In the result the Committee decided not to insert the clause. (*Journal of Gas Lighting*, May 21st, 1901, p. 1,384; *Electrician*, May 17th, 1901, pp. 189, 881.)

H.L.

Finchley and  
Hendon  
Tramways  
Bill, 1901.

By this Bill power was sought to construct two lines of tramways to be worked by electricity on the overhead trolley system. The West Middlesex Waterworks Company opposed, alleging danger to their mains and pipes from electrolytic action. The Bill came before a Committee of the House of Lords (Lord PIRBRIGHT, CHAIRMAN) on June 17th, 1901. Counsel for promoters opened that, although a clause giving compensation in case of damage had been refused in many instances, it had been

H.L.

inserted in the present Bill, and that it had satisfied the Gas Light and Coke Company and the New River Company. Counsel for the West Middlesex Water Company said there had been a "certain amount of conflict in the two Houses on the matter of electrolysis, and no special clause for the protection of water companies' pipes had been allowed in the House of Commons, but one had been granted in the House of Lords. The water companies did not think it was sufficient for their protection. The whole question of electrolysis in connection with tramways was, however, being fought out before a Committee of the House of Commons on the *London United Tramways Company's Bill*, where all the water companies' representatives were able to be present, as all their pipes were concerned; and the West Middlesex Company, acting on his advice, had thought it better not to further contest the matter before their Lordships' Committee." The Committee allowed the Bill to proceed. (*Journal of Gas Lighting*, June 25th, 1901, p. 1,764.) When the Bill reached the House of Commons the *locus standi* of the West Middlesex H.C. Waterworks Company, and also of the National Telephone Company (who had not petitioned in the other House), was objected to, and the petitions were withdrawn. Before the Select Committee of the House of Commons (Mr. [now RIGHT HON. ARTHUR F.] JEFFREYS, CHAIRMAN) the Bill was opposed by the Middlesex County Council and a landowner. The Committee found the preamble not proved. (*Electrician*, August 2nd, 1901, p. 569.)

The London United Tramways Company sought power by this Bill to construct three groups of tramways, one extending existing tramways to Surbiton, East Molesey, Kingston, etc., another going through Putney, Barnes, and Richmond, and a third extending to Heston and Isleworth. The Bill was opposed by the Southwark and Vauxhall, the Chelsea, the Lambeth, the New River, the West Middlesex, and the Grand Junction Waterworks Companies, and others. The *locus standi* of the Waterworks Companies was objected to. Before the Court of Referees it was argued on behalf of the petitioners that the Model Clause did not give sufficient protection, neither did the clauses of the Tramways Act, 1870; that Lord Cross's Committee had said in their report (p. ix.), "The clauses which protect gas and water pipes have

London  
United Tram-  
ways Co.'s  
Bill, 1901.

COURT OF  
REFEREES.

London  
United  
Tramways  
Co.'s Bill,  
1901—*contd.*

worked satisfactorily, and should be continued, but the Committee would direct attention to the observations of Mr. Preece as regards the difficulty arising from the working of tramways by trolley wires. His suggestion as to a strong 'trolley' clause should be carefully considered." It was further argued that the present Bill proposed to authorise the tramways to be worked upon the overhead trolley system; that the House of Lords Committee in two cases—namely, those of the London County Tramways Bill, 1900, and the Sheffield Bill of 1901—had inserted protective clauses (see *ante*, pp. 354 and 357); that after the decision of the House of Lords Committee in 1900 the London County Council had in the present Session, of their own accord, put the protective clause into their new Bill of this year (1901). (g) The Chairman of the Court of Referees is reported to have said: "In regard to electrolytic action, the Court considers that under the circumstances of this case it should be left to a Committee to say whether the petitioners are sufficiently protected, and therefore we allow a *locus standi* in respect of the necessary clauses." (*Electrician*, June 14th, 1901, p. 302; 2 *Saunders and Austin*, 60.) (h)

H.C.

Before the House of Commons Committee (Sir JOHN KENNAWAY, CHAIRMAN) that portion of the opposition relating to the question of electrolysis came up for consideration on June 21st, 1901. For the promoters Professor Sylvanus P. Thompson, F.R.S., Sir William Preece, K.C.B., F.R.S., Mr. Horace F. Parshall, C.E., and Mr. Stephen Sellon, C.E., were called. They considered the Model Clause afforded sufficient protection to gas and water pipes. For the opponents, Professor Ayrton, F.R.S., Mr. Gill (engineer to the Chelsea Waterworks Company), Mr. William King (engineer to the Liverpool United Gas Company), Mr. C. C. Carpenter (chief engineer to the South Metropolitan Gas Company), Professor J. Perry, F.R.S., and Professor J. Dewar,

(g) The Bill of 1901, here referred to, ultimately became the London County Council (Tramways and Improvements) Act, 1901 (1 Edw. 7, c. cclxxi.). The protective clause is not in terms to be found in the Act; but there is a section (18) subjecting the working of the tramways by electrical power to the London County Tramways (Electrical Power) Act, 1900. That Act, as above mentioned, contains the protective clause as well as the model clause.

(h) In the Airdrie and Coatbridge Tramways Bill of 1900, the *locus standi* of the Airdrie and Coatbridge Water Company had been disallowed; 2 *Saunders and Austin* 3.



F.R.S., were called. In the result the CHAIRMAN announced: London United Tramways Co.'s Bill, 1901—*contd.*  
 "The Committee are of opinion that the preamble of the Bill is proved in regard to Clause No. 12"—i.e., the Model Clause. (*Electrician*, June 28th, 1901, pp. 367, 376.)

Before the House of Lords Committee (Duke of NORTHUMBER- H.L.  
 LAND, CHAIRMAN) the only Water Company opposing was the Chelsea Waterworks Company. They again raised the question of electrolytic action on gas and water pipes. In the result the following clause was agreed between the parties and was inserted into the Bill:—

"The powers of the Board of Trade under s. 38 of the London United Tramways Act, 1898, and s. 12 of the London United Tramways Act, 1899 (i), as incorporated with this Act, shall be deemed to include power, subject to the provisions of those sections, to make regulations requiring the company to use such reasonable precautions, including insulated returns, as the Board of Trade may think necessary for the purposes of the said s. 12; and the Board of Trade may in like manner from time to time alter any such regulations."

See s. 24 of the London United Tramways Act, 1901 (1 Edw. 7, ch. cclx.). (*Electrician*, August 2nd, 1901, p. 568.) By the London United Tramways Act, 1902 (2 Edw. 7, ch. ccxlvii.), authorising the construction of further tramways, this s. 24 is one of those incorporated with the Act by s. 27.

The Clyde Valley Electrical Power Act, 1901, contains the following clause, which it is understood was inserted by agreement:—

Clyde Valley Electrical Power Act, 1901.

66. "For the protection of the Corporation of the City of Glasgow as such, and as acting in execution of the several public and local and personal Acts by which any powers, jurisdictions, or authorities are conferred on them (in this section called "the corporation"), the following provisions shall (unless otherwise agreed upon) have effect and be binding on the company (that is to say):—

For protection of Corporation of Glasgow.

- \* \* \* \* \*
- (8) "The company shall make full compensation to the corporation for all loss or damage which may occur to the sewers, mains, pipes, tramways, electric lines, apparatus, or other property of the corporation (1) by fusion or electrolytic action arising from electricity in or escaping from the mains and electric lines of the company, and (2) by the exercise of the powers of this Act, conferred upon the company, so far as relating to the construction, alteration, maintenance, or repair of any works of the company.

\* \* \* \* \*

---

(i) The sections referred to were, *inter alia*, incorporated with the Act of 1901 (s. 23). Section 38 of the Act of 1898 is the usual clause authorising the motive power, subject to Board of Trade Regulations. Section 12 of the Act of 1899 is the usual Model Clause.

Mitcham  
Light Rail-  
ways Order,  
1901.

BOARD OF  
TRADE.

As to powers  
of Board of  
Trade in  
respect of  
use of  
mechanical  
power.

For protec-  
tion of  
company of  
proprietors of  
Lambeth  
Waterworks.

On the 18th of October, 1901, an inquiry was held at the Board of Trade in the case of the Mitcham Light Railways Order of the Light Railway Commissioners, the confirmation of which was opposed before the Board of Trade by the Lambeth Waterworks Company on the question of anticipated damage through fusion or electrolytic action; the motive power for the proposed line being electricity. The Water Company asked for two new clauses for the protection of their mains and pipes, and it was contended on their behalf that the Model Clause was insufficient. The proposed two clauses were as follows:—

“The powers of the Board of Trade under ss. 50, 51 and 52 of this Order shall be deemed to include power, subject to the provisions of those sections, to make regulations requiring the council to use such reasonable precautions, including insulated returns, as the Board of Trade might think necessary for the purposes of the said s. 52, and the Board of Trade may in like manner from time to time alter any such regulations.”

“For the protection of the company of proprietors of Lambeth Waterworks, the following provisions shall, unless otherwise agreed between the council and the protected company, have effect with respect to the use of electricity as a motive power on the light railway. The council shall make full compensation to the protected company for any loss or damage which they may sustain by reason of any fusion or electrolytic action on their mains, pipes, or apparatus which may in any way be caused by the exercise of any of the powers by this Act conferred upon the council.”

The main object of the company was to obtain power for the Board of Trade, by the first of these clauses, to require insulated returns in the place of uninsulated metallic returns of low resistance. In the result Mr. HOPWOOD (now Sir FRANCIS HOPWOOD, K.C.B.) declined to advise the Board of Trade to accept the clauses proposed. He is reported to have said that “Whatever lack of uniformity there might have been in parliamentary procedure as regarded opposed Bills, the authorities of the House who dealt with unopposed Bills had uniformly adhered to the Joint Committee Clause. The Board of Trade had taken the same line. . . . There had been absolute uniformity of practice by the Department. They had rejected amendments in substance of this description in the *Wakefield Case* lately, and also in the cases of *Llanelly* and the *Middlesex County Council*; and he felt that it would be impossible for him to advise the Board of Trade to accept either of the amendments. On the other hand, he desired to make it perfectly clear that he should

give his adhesion to an alteration of the Regulations if and when it should be shown that they were ineffective for the purpose for which they had been framed."(*j*) (*Electrician*, October 18th, 1901, p. 999; *Jl. of G. L.*, October 22nd, 1901, p. 1,042.)

The Sheffield clause was inserted during the Session of 1901 in several other instances, but it is understood that in every such case it was so inserted by agreement. The following are the instances referred to:—

(1) By the Bury Corporation Tramways Bill, 1901, it was proposed to authorise the construction of various tramways to be worked by electricity. A clause similar to the Sheffield clause was inserted for the protection of the Bury and District Joint Water Board. It was inserted by agreement, the Corporation of Bury being one of the constituent authorities and the largest partner in the Joint Board (s. 19).

Other instances in Session of 1901.

Bury Corporation Tramways Act, 1901.

(2) By the Dublin St. James's Gate Brewery Tramways Bill, 1901, it was proposed to authorise Messrs. Arthur Guinness, Son & Co., Limited, to construct tramways in the City of Dublin in connection with St. James's Gate Brewery, and to work the same by electricity. A clause similar to the Sheffield clause was inserted by agreement for the protection of the Corporation of Dublin, who owned the waterworks, and of the Alliance and Dublin Consumers Gas Company, who owned the gasworks. The Bill could not have been successfully

Dublin, St. James's Gate Brewery Tramways Act, 1901.

(*j*) The practice of the Board of Trade has since been adhered to, but a clause may be inserted by agreement between promoters and opponents. See, *e.g.*, Swansea and District Light Railways Order, 1902, s. 60. In this Order the clause was agreed between the corporation, who were the promoters, and the Swansea Gas Light Co. The corporation had the water supply in their own hands. The Commissioners refused to insert the clause (November 5th, 1900). Afterwards (July 31st, 1901), before Mr. Hopwood, C.B. (now Sir Francis Hopwood K.C.B.), Permanent Secretary to the Board of Trade, the solicitor for the Swansea Gas Company appeared and asked for the insertion of the clause which had been agreed upon. Counsel for the Order admitted that the clause had been agreed upon. It appears from the shorthand notes of the proceedings as to the confirmation of the Order, that Mr. Hopwood expressed himself as follows, after hearing the parties on the subject of the clause: "I think I must deal with it in this way. We have some four or five cases outstanding in which we have deferred giving a decision because we have waited on the steps of Parliamentary Committees. The Board of Trade will have to come to a decision with regard to all these cases; and we will very favourably consider this case in light of the general decision we arrive at, and also in light of the fact that this was an agreed clause between the gas company and the corporation." In the result the Board of Trade inserted the agreed clause, and have declined to insert any such clause unless where it has been agreed.

promoted without the consent of the corporation. (S.O. H.C. and H.L. 22).

King's Norton  
and North-  
field Urban  
District  
Council  
Tramways  
Act, 1901.

(3) In this case the tramways were to be worked by electricity. The Corporation of Birmingham are the gas and water authority for the district of the promoters, and they presented a petition, whereupon the Sheffield clause was conceded, and inserted by agreement (s. 53.)

Eccles Cor-  
poration Act,  
1901.

(4) By the Eccles Corporation Bill, 1901, the corporation proposed to authorise the construction of certain tramways to be worked by electricity. The Manchester Corporation supplied water and the Salford Corporation supplied gas within the district, and these corporations asked for a protective clause, which was inserted by agreement. The protection given was in the following words:—

“The corporation shall take all reasonable precautions in constructing, placing, and maintaining their electric lines and circuits and other works of all descriptions, and also in working their undertaking so as not injuriously to affect by fusion or electrolytic action any such gas mains, pipes, works, or apparatus.” (Ss. 39 (4) and 40 (4).)

A sub-section providing for arbitration in case of difference was added.

City of  
Birmingham  
Tramways  
Act, 1901.

(5.) This was a Bill promoted by a company for the construction of additional tramways in Birmingham. By consent the Sheffield clause was inserted for the protection of the gas and water pipes belonging to the corporation (s. 46).

Crompton  
Urban Dis-  
trict Council  
Tramways  
Order, 1901.

(6.) This Provisional Order was promoted by the Crompton Urban District Council for the construction of tramways to be worked by mechanical power, including electrical power. A protective clause was inserted by agreement for the protection of the gas and water mains and pipes belonging to the Oldham corporation (s. 7 (2)).

Royton Urban  
District  
Council  
Tramways  
Order, 1901.

(7.) This Provisional Order was promoted by the Royton Urban District Council for the construction of tramways within their district to be worked by mechanical power, including electrical power. A protective clause, which included the Sheffield clause, was inserted by agreement for the protection of the gas and water mains and pipes of the Oldham Corporation (s. 10 (2)).

West Riding  
Tramways  
Order, 1901.

(8.) This Provisional Order was promoted by the United Kingdom Tramway and Light Railway and Electrical Syndicate,

Limited, to construct tramways in the Borough of Pontefract and the Urban Districts of Castleford, Featherstone, Normanton, and Whitwood, etc. By agreement a protective clause was inserted for the protection of the mains and pipes of certain gas companies named in the clause. The sub-section relating to electrolytic action is as follows :—

West Riding  
Tramways  
Order, 1901—  
*contd.*

“ If in the construction, placing, or maintaining of the tramways or the working thereof, the promoters omit to take all necessary precautions so as to prevent fusion or injurious electrolytic interference with the gas mains, pipes, or other metallic pipes, structures or substances of the gas company, or if they fail to comply with the Board of Trade Regulations for the time being made under the provisions of s. 28 of this order, and by reason of such omission or failure injury is caused to any gas mains, pipes, or other metallic pipes, structures, or substances of the gas company, the promoters shall make compensation to the gas company for any such injury which the gas company shall be proved to have sustained.” (S. 10 (2).)

A sub-section providing for arbitration in case of difference was added.

This Bill was promoted by a company. A clause was inserted for the protection of the Brighton Corporation by agreement, and one of the sub-sections was to the following effect :—

SESSION OF  
1902.  
Brighton and  
Rottingdean  
Seashore  
Electric  
Tramroad  
Act, 1902.

“ The corporation shall have the right at all reasonable times to inspect any current indicator or other similar apparatus provided by the company in accordance with the Board of Trade Regulations for indicating leakage of the electrical current used by the company.” (Sect. 18 (5).)

This Order was promoted by the Urban District Council of Cheadle and Gatley to construct a tramway within their district. A clause was inserted by agreement for the protection of the Stockport Corporation to the following effect :—

Cheadle and  
Gatley Urban  
District  
Council  
Tramway  
Order, 1902.

“ The promoters shall make full compensation to the corporation for any damage or injury which may be occasioned to the mains, pipes, works or apparatus of the corporation for the supply of gas or water by or in consequence of fusion or electrolytic action, or otherwise in consequence of the exercise of the powers of this Order, and the amount of such compensation shall in case of difference be determined by arbitration.” (S. 8 (5).)

This Order was promoted by the same company which promoted the West Riding Tramways Order, 1901. The clause in regard to electrolytic action which was inserted in the Order of 1901 was again introduced by agreement into the Order of 1902.

West Riding  
(Knottingley)  
Tramways  
Extension  
Order, 1902.

This Order was promoted by the Corporation. A protective clause in favour of the Heywood and Middleton Water Board was inserted by agreement. Cf. Bury Act, 1901, *ante*, p. 365.

Heywood  
Corporation  
Tramways  
Order, 1902—  
*contd.*

Model Clause  
not inserted  
in Electric  
Lighting  
Orders.

The Model Clause is not inserted in Provisional Orders made by the Board of Trade under the Electric Lighting Acts, 1882 and 1888, because it is considered that the Board of Trade Regulation A 28, coupled with s. 18 of the Schedule to the Electric Lighting (Clauses) Act, 1899, affords sufficient protection against leakage or electrolytic action.

Model Clause  
not inserted  
in Power  
Acts.

The Model Clause is not inserted in any of the Power Acts. The reason is understood to be the same as above stated in the case of Provisional Orders under the Electric Lighting Acts, 1882 and 1888. Section 18 of the Schedule to the Electric Lighting (Clauses) Act, 1899, is incorporated with all the Power Acts; but two of them (Durham and North Metropolitan) exclude from incorporation s. 6 of the Act of 1882, which gives the Board of Trade power to make Regulations. See further the Chapter on the POWER ACTS.

Model Clause  
inserted in  
Tramway  
Acts.

The Model Clause is inserted in all Tramways Acts which authorise electric traction. See further on this subject the Chapter on TRAMWAYS AND LIGHT RAILWAYS, *post*, p. 374.

Model Clause  
inserted in  
Railway Acts  
and Light  
Railway  
Orders.

The Model Clause is inserted in every Railway Act which authorises the employment of electric traction and passed since the Report of the Joint Committee of 1893. See further the Chapter on TUBE AND OTHER RAILWAYS authorised to be worked by electricity, *post*, p. 403. In like manner the Model Clause is inserted in all Light Railway Orders authorising electric traction. See further the Chapter on TRAMWAYS AND LIGHT RAILWAYS authorised to be worked by electricity, *post*, p. 374.

Terms of the  
Model Clause.

The latest form of the Model Clause in use will be found in the Model Bills and Clauses, as amended 1902, under the head of "Railway (Electrical Power)" and is as follows:—

Provisions as  
to use of  
electrical  
power.

4. The following provisions shall apply to the use of electrical power under this Act unless such power is entirely contained in and carried along with the carriages:—

- (1.) The Company shall employ either insulated returns or uninsulated metallic returns of low resistance.
- (2.) The Company shall take all reasonable precautions in constructing, placing, and maintaining their electric lines and circuits, and other works of all descriptions, and also in working their undertaking so as not injuriously to affect, by fusion or electrolytic action, any gas or water pipes or other metallic pipes, structures, or substances, or to interfere with the working of any wire, line, or apparatus from time to time used for the purpose of transmitting electrical power or of telegraphic, telephonic, or electric signalling communication or the currents in such wire, line or apparatus:
- (8.) The electrical power shall be used only in accordance with the Board

of Trade Regulations, and in such regulations provisions shall be made for preventing fusion or injurious electrolytic action of or on gas or water pipes or other metallic pipes, structures, or substances, and for minimising, as far as is reasonably practicable, injurious interference with the electric wires, lines, and apparatus of other parties and the currents therein, whether such lines do or do not use the earth as a return :

Form of  
Model Clause  
—contd.

- (4.) The Company shall be deemed to take all reasonable and proper precautions against interference with the working of any wire, line, or apparatus if and so long as they adopt and employ, at the option of the Company, either such insulated returns or such uninsulated metallic returns of low resistance, and such other means of preventing injurious interference with the electric wires, lines, and apparatus of other parties and the currents therein as may be prescribed by the Board of Trade Regulations, and in prescribing such means the Board shall have regard to the expense involved and to the effect thereof upon the commercial prospects of the undertaking :
- (5.) At the expiration of two years from the passing of this Act the provisions of this section shall not operate to give any right of action in respect of injurious interference with any electric wires, lines or apparatus, or the currents therein unless in the construction, erection, maintaining and working of such wires, lines, and apparatus all reasonable and proper precautions including the use of an insulated return have been taken to prevent injurious interference therewith and with the currents therein by or from other electric currents :
- (6.) If any difference arises between the Company and any other party with respect to anything in this section contained such difference shall unless the parties otherwise agreed be determined by the Board of Trade, or at the option of the Board by an arbitrator to be appointed by the Board, and the costs of such determination shall be in the discretion of the Board or of the arbitrator as the case may be :
- (7.) (k) *When any Department of His Majesty's Government represents to the Board of Trade that the use of electrical power under this Act injuriously affects, or is likely to injuriously affect, any instruments or apparatus, whether electrical or not, used in any observatory or laboratory belonging to or under the control of that Department, the Board of Trade after such inspection or inquiry as they may think proper may, by their Regulations, require the Company to use such reasonable and proper precautions, including insulated returns, as the Board of Trade may deem necessary for the prevention of such injurious affection. For the purposes of this sub-section any inspector of the Board of Trade may, during his inspection of the Company's works and apparatus, be accompanied by any person or persons appointed in that behalf by the Government Department concerned, and the Company shall give all due facilities for the inspection. Provided always that in the case of any observatory or laboratory established after the passing of this Act or of any instruments or apparatus hereafter used in any existing observatory or laboratory*

*Observatories  
protection.*

(k) London district and elsewhere in neighbourhood of observatories, &c.

E.L.

B B

Form of  
Model Clause  
—*contd.*

*which may be of greater delicacy than those used therein at the passing of this Act, the Board of Trade shall consider to what extent, if any, it is expedient in the interests of the public that the powers of this sub-section should be exercised, regard being had to the site of the observatory or laboratory, or the purposes of the instruments or apparatus, as the case may be :*

Penalty.

- (8.) The Company using electrical power contrary to the provisions of this Act, or of the Board of Trade Regulations, shall for every such offence be subject to a penalty not exceeding ten pounds, and also in the case of a continuing offence to a further penalty not exceeding five pounds for every day during which such offence continues after conviction thereof. Provided always that whether any such penalty has been recovered or not the Board of Trade, if in their opinion the Company in the use of electrical power under the authority of this Act have made default in complying with the provisions of this Act or the Board of Trade Regulations, may by order direct the Company to cease to use electrical power, and thereupon the Company shall cease to use electrical power, and shall not again use the same unless with the authority of the Board of Trade, and in every such case the Board of Trade shall make a special report to Parliament notifying the making of such order (i).
- (9.) The expression "*Company*" in this section includes licensees and any person owning, working, or running carriages over any railway of the *Company*.

Sub-section 7, of which the marginal note is "Observatories protection," is the outcome of various representations made to the Board of Trade on the subject of the matters therein referred to. The Board of Trade appointed a small expert committee to investigate carefully the amount of magnetic disturbance produced in the neighbourhood of electrical tramways and railways constructed and working under Board of Trade Regulations, and to report. After obtaining the Report of the Committee, the Board of Trade arranged a conference between representatives of the Board of Trade, the Government observatories and laboratories, and of the electric railway and tramway interests. The conference is reported in *Electrician*, November 16th, 1900, p. 131. The sub-section above referred to is the result of that conference.

The Cape  
Town Case.

In April, 1902, the Judicial Committee of the Privy Council decided a case which is of much interest in connection with the question of leakage and electrolysis. The Cape Town Tramways Companies, Limited, were incorporated by certain Colonial Acts, and had worked certain tramways since 1896 by electricity

---

(i) This sub-section does not occur in this place in Tramway Acts or Orders or in Light Railways Orders, because in these cases special provisions on the subject are elsewhere inserted.



*Cape Town  
Case—contd.*

as the motive power. They erected a generating station and conveyed the current thence by means of overhead insulated wires, running parallel to the tram lines in the usual way, the current returning to the generating station partly through the tram rails and partly through the earth, the rails not being insulated from the earth. The Eastern and South African Telegraph Company own a cable which, after passing through the waters of Table Bay, reaches a cable hut on the shore at Cape Town, whence communication is established by land wires with a central office. From the laying of this cable in 1889 to 1896, when the tramway system was opened, no difficulty was experienced in its working. As soon as this system came into force, disturbances to the signals received from the cable occurred, and were of so serious a character as to render the working of the cable impossible whilst the tramcars were running. The starting, stopping, and alteration of speed of each car was attended by the production of a false signal upon the receiving instruments at Cape Town. The appellants' cable was made up of an inner core of copper, surrounded by an insulating substance such as gutta-percha, which is surrounded and protected by a sheathing of uninsulated iron wires. The escape took place on the land at some distance from the cable as laid across Table Bay, and the electricity spread along the land underneath Table Bay until it reached the cable. The way in which the cable was affected is thus stated by Lord ROBERTSON, who delivered the judgment of the Privy Council:—

“At some point, then, in Table Bay this electricity, having escaped and being at large, was attracted by the appellants' cable, entered the sheathing of the cable, and by the sheathing, as a conductor, found its way back to the tramway central station, whence it had started, and thus completed its circuit. While travelling along the sheathing of the appellants' cable, the current varied very frequently and at irregular intervals, in accordance with the starting and stopping of the tramway cars. It was this irregularity and jerking which did the mischief; and but for this the current might have used the sheathing as a conductor without any injury. As things were, the current in the sheathing induced similar irregular currents in the conducting wire of the cable, with the result that the signals were interfered with, and, as recorded, were confused and unreadable. None of the apparatus

*Cape Town  
Case—contd.*

was damaged; but the working of the apparatus was so interfered with as to take away its utility for the time of the interruption. In order to complete the description of the nature of the injury, it is necessary to add that the difficulty has now been completely got over by laying what is called a twin-core cable for several miles out, the two wires rectifying one another's action. Now that this has been done, the electricity from the tramways can pass along the sheathing without any harm being done. The cost of this remedial measure forms a large part of the claim in the suit, much of the rest representing experimental and tentative measures. Into this, however, it is unnecessary further to enter, as the quantum of damage is not raised in this appeal, but only the question of liability."

Except as regards a piece of tramway the whole of the tramway company's lines were constructed under statutory authority of Cape Colony. The statutes contain the following provision:—"Provided that . . . the company specially undertakes that in the event of any electric leak taking place and damage being thereby caused at any time by electrolysis or otherwise, it will reimburse and make good to the council" (i.e., the Council of the City of Cape Town) "or other body or person all costs, damages and expenses to which the Council or other body or person may be put by reason thereof; and provided further that nothing in this Act contained shall entitle the company to use the rails of any of the said lines of tramway as a part of its system of conductors for the return electrical current without the consent of the Council first had and obtained." This consent of the council was duly obtained in accordance with this enactment, but certain conditions were attached to the consent, the fourth of which was as follows:—"If at any time and at any place a test be made by connecting a galvanometer or other current indicator to the insulated return and to any pipes in the vicinity, it shall always be possible to reverse the direction of any current indicated by interposing a battery of three Leclanché cells, connected in series if the direction of the current is from the return to the pipe, and by interposing one Leclanché cell if the direction of the current is from the pipe to the return. If at any time a greater leakage is discovered than would render it possible for the current to be reversed in the manner above indicated, the

same shall be localised and removed as soon as practicable, and the running of the cars shall be stopped unless the leak is so localised and removed within twenty-four hours." *(Cape Town Case—contd.)*

Lord ROBERTSON in the course of his judgment states as follows:—"Communications took place between the parties, and both seem to have frankly co-operated in ascertaining the cause of injury and devising remedies. After this had been done, with the result already stated, the present suit was instituted on April 15th, 1899, in order to determine the question of liability." The judgment of the Supreme Court of Cape Colony was in favour of the tramway company.

Before the Judicial Committee of the Privy Council the appellants maintained, and the respondents denied, that what happened constituted a "leak" within the meaning of the statutes, and of the condition attached to the use by the company of the "lines of tramway as part of its system of conductors for the return of electrical current." In regard to this question, the judgment of the Privy Council, as expressed by Lord ROBERTSON, was in these terms:—"The first question, then, is, Was it a leak, either in the sense of the statutory undertaking or of this condition, that sent out this electricity which reached the cable? For if so, the stipulated liability has been incurred. Their lordships are unable to think that it was. The language of both the statutory undertaking and of the condition seems to point to some defect in apparatus not contemplated as a condition of the working of the system. But the departure of the electricity from the rails arose from no defect, but from the necessary condition of things, if the tramcars were to run and the rails to be used as a return. The evidence shows clearly that, if uninsulated (as was the case here), the rails of necessity conduct home to the central station only some of the electricity, the rest leaving the rails and going afield. Giving to the word 'leak' whatever expansion may be appropriate to its extension to electricity, their lordships do not consider the event which has occurred to fall within the undertaking and condition. The escape was, on the contrary, a natural incident of the operations legalised under the statutes." The judgment appealed from was therefore affirmed. *Eastern & South African Telegraph Co. v. Cape Town Tramways Companies*, [1902] A. C. 381.

## II. TRAMWAYS AND LIGHT RAILWAYS.

### (1.) TRAMWAYS WORKED BY ELECTRICAL POWER.

The Tramways Act, 1870 (33 & 34 Vict. c. 78), provides by s. 34 that "all carriages used on any tramway shall be moved by the power prescribed by the special Act, and where no such power is prescribed, by animal power only." By s. 23 "special Act" is defined for the purposes in question to include Provisional Order. Provisional Orders may therefore be made prescribing motive power other than animal power.

Consent of  
local  
authority.

If a Provisional Order is sought to be obtained under the Tramways Act, 1870, otherwise than by the local authority, the promoters must obtain the consent of the road authority of the district. If the tramways are proposed to be laid in two or more districts then, if the Board of Trade are satisfied after inquiry that two-thirds of the length is in the district or districts where the consent has been obtained, they may sanction the Provisional Order, making a special report, stating the grounds upon which they have made such an Order (ss. 4 and 5).

Where promoters proceed by Bill instead of by Provisional Order they must comply with Standing Order No. 22 (H. C. & H. L.), which requires the consent of the local authority and of the road authority where in any district there is a road authority distinct from the local authority; the consents of the local and road authorities for two-thirds of a continuous line of tramway being deemed to be sufficient.

Land.

Under the Tramways Act, 1870, s. 8, the Board of Trade are authorised to make Provisional Orders with this special qualification, "but so that any such Provisional Order shall not contain any provision for empowering the promoters or any other person to acquire lands otherwise than by agreement. . . ." Where, therefore, promoters desire to obtain compulsory powers to take land, resort is had to procedure by Bill.

The Light Railways Act, 1896, does not contain any definition of "light railway." Section 11 provides that an Order under that Act may contain provisions for the incorporation, subject to such exceptions and variations as may be mentioned in the Order of all or any of the provisions of, *inter alia*, the Lands Clauses Acts. Power may, therefore, be inserted to take land compulsorily—*e.g.*, for generating stations. See *post*, p. 397. Furthermore, the consent of the local authority is not necessary; although by sect. 7 the Commissioners are to "satisfy themselves that all reasonable steps have been taken for consulting the local authorities, including road authorities, through whose areas the railway is intended to pass, and the owners and occupiers of the land it is proposed to take. . . ."

Light Rail-  
ways Act.

For these reasons applications for what are really tramways have in many cases been successfully made under the Light Railways Act, 1896. See evidence of the late Sir COURTENAY BOYLE, K.C.B., before the Joint Committee of the House of Lords and the House of Commons on Municipal Trading, Parliamentary Paper No. 305 of 1900, at Questions 131—136.

In connection with tramway enterprise, much discussion has of late years arisen as to the desirability of reposing in local authorities the power of (in effect) vetoing a proposed enterprise by withholding their consent, or of consenting subject, it may be, to unreasonable conditions for the advantage of the local authority. The Joint Committee on Municipal Trading has taken evidence upon this question. This Committee will probably be reappointed. In the meantime reference may be made to the evidence of Mr. Albert Gray, at Questions 342—346. In the Report of Lord Cross's Committee of 1898 occurs the following passage:—

Policy of  
requiring  
consent of  
local  
authority.

"The Committee are of opinion that while it may be advisable to maintain the veto of local authorities as to the erection of overhead wires, given by section 14 of the Act of 1882, in respect of other electric wires, it is not advisable that in the case of overhead wires for traction purposes the local authority, other than the London County Council and county boroughs, should have an absolute veto. While due weight should be given by the Board of Trade to the representations of local authorities, the Committee think that in the case of wires for purposes of

traction it would be sufficient to give a *locus standi* to such local authorities."

Tramway Acts or Orders which authorise the use of mechanical power contain the following section :—

Provisions as  
to motive  
power.

The carriages used on the tramways may be moved by animal power or, subject to the following provisions, by mechanical power; that is to say:—

- (1.) The mechanical power shall not be used except with the consent of and according to a system approved by the Board of Trade.
- (2.) The Board of Trade shall make regulations (in this Act referred to as "the Board of Trade Regulations") for securing to the public all reasonable protection against danger arising from the use under this Act of mechanical power on the tramways, and for regulating the use of electrical power.
- (3.) The *Company* (*m*), or any [other] company or person using any mechanical power on the tramways contrary to the provisions of this Act, or of the Board of Trade Regulations, shall for every such offence be liable to a penalty not exceeding ten pounds, and also in the case of a continuing offence to a further penalty not exceeding five pounds for every day during which such offence is continued after conviction thereof.
- (4.) The Board of Trade, if they are of opinion—
  - (a) That the *Company*, or such [other] company or person have or has made default in complying with the provisions of this Act or of the Board of Trade Regulations, whether a penalty in respect of such non-compliance has or has not been recovered, or—
  - (b) That the use of mechanical power as authorised under this Act is a danger to the passengers or the public,
 may, by order, either direct the *Company* or such [other] company or person to cease to use such mechanical power, or permit the same to be continued only subject to such conditions as the Board of Trade may impose, and the *Company* or such [other] company or person shall comply with every such order. In every such case the Board of Trade shall make a special report to Parliament notifying the making of such order.

Definition of  
mechanical  
power.

"Mechanical power" is generally defined in Acts and Provisional Orders to include steam, electrical and every other motive power, not being animal power.

Model Clause  
always  
inserted.

In all Tramway Acts or Provisional Orders authorising tramways (whether in the hands of local authorities or of companies), there is always inserted the Model Clause—"Special provisions as to the use of electrical power." See the terms of this clause in the Chapter on LEAKAGE AND ELECTROLYSIS, *ante*, p. 368. This section, as well as the section regarding motive power, *supra*, expressly authorises the Board of Trade to make Regulations.

---

(*m*) Or Corporation, District Council, or as the case may be.

While, on the one hand, the clause relating to motive power empowers the Board of Trade to make Regulations for securing to the public all reasonable protection against danger arising from the use under the Act or Order of mechanical power on the tramways, and for regulating the use of electrical power, the Model Clause, on the other hand, provides (1) that the promoters shall employ either insulated returns or uninsulated metallic returns of low resistance; (2) that the promoters shall take all reasonable precautions in constructing, placing and maintaining their electric lines and circuits and other works of all descriptions, and also in working their undertaking so as not injuriously to affect by fusion or electrolytic action any gas or water pipes or other metallic pipes, structures, or substances, or to interfere with the working of any wire, line, or apparatus from time to time used for the purpose of transmitting electrical power, or of telegraphic, telephonic, or electric signalling communication or the currents in such wire, line, or apparatus; and (3) it provides by sub-sect. 3, that the electrical power shall be used only in accordance with the Board of Trade Regulations, and that in such Regulations provision shall be made for preventing fusion or injurious electrolytic action of or on gas or water pipes or other metallic pipes, structures, or substances, and for minimising as far as is reasonably practicable injurious interference with the electric wires, lines, and apparatus of other parties, and the currents therein, whether such lines do or do not use the earth as a return.

Board of  
Trade Regu-  
lations.

The following is one of the latest set of Regulations made by the Board of Trade (superseding similar Regulations, May 14th, 1902) for securing to the public reasonable protection against danger in the case of tramways worked by electrical power (overhead trolley system):—

Overhead  
Trolley  
System.

### REGULATIONS,

DATED , 1902, MADE BY THE BOARD OF TRADE  
AS REGARDS ELECTRICAL POWER (OVERHEAD TROLLEY  
SYSTEM) ON THE ABERDEEN CORPORATION TRAMWAYS.

The Board of Trade, under and by virtue of the powers conferred upon them in this behalf, do hereby make the following Regulations for securing to the public reasonable protection against danger in the exercise of the powers conferred by Parliament with respect to the use of electrical power (overhead trolley system) on all or any of the tramways on which the use of such power has been authorised

Regulations—  
Overhead  
Trolley Sys-  
tem—*contd.*

by the Aberdeen Corporation Tramways Act, 1900 (hereinafter called "the tramways").

And the Board of Trade do also hereby make the following byelaws with regard to the use of electrical power on all or any of such tramways worked on the overhead trolley system.

The Order of the Board of Trade in this behalf, dated 14th day of May, 1902, is hereby rescinded.

*Regulations.*

- I. Every motor carriage used on the tramways shall comply with the following requirements, that is to say:—
  - (a.) It shall be fitted, within six months from the date of these Regulations, or such further period as the Board of Trade may prescribe, with an apparatus to indicate to the driver the speed at which it is running.
  - (b.) The wheels shall be fitted with brake blocks, which can be applied by a screw or treadle, or by other means, and there shall be in addition an adequate electric brake.
  - (c.) It shall be numbered inside and outside, and the number shall be shown in conspicuous parts thereof.
  - (d.) It shall be fitted with a suitable fender, which will act efficiently as a life protector, and with a special bell or whistle to be sounded as a warning when necessary.
  - (e.) It shall be so constructed as to enable the driver to command the fullest possible view of the road before him.
  - (f.) It shall be free from the clatter of machinery, such as to constitute any reasonable ground of complaint either to the passengers or to the public.
- II. No trailing carriage shall be used on the tramways except in the case of the removal of a disabled car.
- III. Every carriage used on the tramways shall be so constructed as to provide for the safety of passengers, and for their safe entrance to, exit from, and accommodation in such carriage, and for their protection from the apparatus used for drawing or propelling the carriage.
- IV. Every carriage on the tramways shall, during the period between one hour after sunset and one hour before sunrise, or during fog, carry a lamp so constructed and placed as to exhibit a white light visible within a reasonable distance to the front, and every such carriage shall carry a lamp so constructed and placed as to exhibit a red light visible within a reasonable distance to the rear.
- V. The Board of Trade and their officers may, from time to time, and shall, on the application of the local authority of any of the districts through which the said tramways pass, inspect the carriages used on the tramways, and the working arrangements generally, and may, whenever they think fit, prohibit the use on the tramways of any of them which, in their opinion, are not safe for use.
- VI. The speed at which the carriages shall be driven or propelled along the tramways shall not exceed the rate of *eight* miles an hour, except in Queen's Road and Albyn Place between Bayview Road and Union Street (except when crossing Queen's Cross) in Holburn Street, between Bridge of Dee and Great Northern Road and in King's Street between Bridge of Don and the Fire Brigade Station, where the speed shall not exceed the rate of *ten* miles an hour.



The speed shall not exceed the rate of—

*Five miles an hour—*

In Castle Street, Justice Street and Park Street, between King Street and the junction of Park Street with Constitution Street.

*Four miles an hour—*

- (a.) Through facing points, whether fixed or movable.
- (b.) On the curve between Park Street and Constitution Street.
- (c.) On the curve between Union Street and St. Nicholas Street.
- (d.) On the curve between Union Street and Holburn Street.
- (e.) On the curve between Holburn Street and Great Western Road.
- (f.) On the curve between South Mount Street and Rosemount Place.
- (g.) On the curve between Beechgrove Terrace and Fountainhall Road.
- (h.) On the curve between King's Street and Castle Street.

Regulations—  
Overhead  
Trolley System—*contd.*

VII. The electrical pressure or difference of potential between any suspended conductors used in connexion with the working of the tramways by electrical power and the earth, or between any two such suspended conductors, shall in no case exceed 550 volts. The electrical energy supplied through feeders shall not be generated at or transformed to a pressure higher than 650 volts except with the written consent of the Board of Trade and subject to such regulations and conditions as they may prescribe.

VIII. The suspended conductors used in connexion with the working of the tramways by electrical power shall be in no part at a less height from the surface of the street than 17 feet, and shall be securely attached to supports, the intervals between which shall not, except with the approval of the Board of Trade, exceed 120 feet.

IX. The line wire shall be divided up into sections not exceeding (except with the special approval of the Board of Trade) one-half of a mile in length, between every two of which shall be inserted an emergency switch so enclosed as to be inaccessible to pedestrians.

X. No part of any electric line shall be used for the transmission of more than 800,000 Watts, except with the consent in writing of the Board of Trade, and efficient means shall be provided to prevent this limit being at any time exceeded.

XI. All electrical conductors fixed upon the carriages in connexion with the "trolley wheel" shall be formed of flexible cables protected by india-rubber insulation of the highest quality, and additionally protected wherever they are adjacent to any metal so as to avoid risk of the metal becoming charged.

XII. The trolley standard of every double-decked carriage shall be electrically connected to the wheels of the carriage in such manner as either to prevent the possibility of the standard becoming electrically charged from any defect in the electrical conductors contained within it or give a continuous warning signal to the driver or conductor. No passenger shall be allowed to travel on the roof as long as there is risk of electric shock.

XIII. An emergency cut-off switch shall be provided and fixed so as to be conveniently reached by the driver in case of any failure of action of the controller switch.

XIV. Efficient guard wires shall be erected and maintained at all places

Regulations—  
Overhead  
Trolley Sys-  
tem—*contd.*

where telegraph or telephone wires cross above the electric conductors of the tramways.

- XV. Where any accident by explosion or fire, or any other accident of such kind as to have caused or to be likely to have caused loss of life or personal injury has occurred in connexion with the electric working of the tramways, immediate notice thereof shall be given to the Board of Trade (n).

*Penalty.*

NOTE.—The Corporation or any company or person using electrical power on the tramways contrary to any of the above Regulations is, for every such offence, subject to a penalty not exceeding £10, and also in the case of a continuing offence, to a further penalty not exceeding £5 for every day during which such offence continues after conviction thereof.

*Byelaws.*

- I. The special bell or whistle shall be sounded by the driver of the carriage from time to time when it is necessary as a warning.
- II. The entrance to and exit from the carriages shall be by the hindermost or conductor's platform, except at a terminus when the car is stationary.
- III. The carriages shall be brought to a standstill whenever it is necessary to avoid impending danger, and immediately before reaching the following points :—
  - (a.) In George Street—
    - (1.) At the crossing of Hutcheon Street.
    - (2.) At the crossing of John Street.
    - (3.) At the crossing of Schoolhill.
  - (b.) In Constitution Street and the Links before reaching the junction thereof.
  - (c.) In Justice Street and Park Street at East North Street.
  - (d.) In Castle Street at its junction with King Street.
  - (e.) In Union Street at Market Street.
  - (f.) In South Mount Street at Baker Street on the inward journey.
  - (g.) In Rosemount Place at its junction with Esalemount Avenue.
  - (h.) In Holburn Street—
    - (1.) At South Mile End on the outward journey.
    - (2.) At Broomhill Road.
    - (3.) At Great Western Road on the inward journey.
  - (i.) In King Street at North Street.
- IV. A printed copy of these Regulations and byelaws shall be kept in a conspicuous position inside of each carriage in use on the tramways.

*Penalty.*

NOTE.—Any person offending against or committing a breach of any of these byelaws is liable to a penalty not exceeding forty shillings.

---

(n) For Forms provided by the Board of Trade for Return of Accidents, see *post*, p. 401. See also Notice of Accidents Act, 1894 (57 & 58 Vict. c. 28).

The provisions of the Tramways Act, 1870, with respect to the recovery of penalties, are applicable to the penalties for the breach of these Regulations or byelaws.

Signed by Order of the Board of Trade, this      day of      , 1902.

An Assistant Secretary to the  
Board of Trade.

The following is a recent form of Regulations (also for securing to the public reasonable protection against danger) made in the case of Surface Contact System (Lorain):—

Regulations—  
Surface Con-  
tact System.

### REGULATIONS,

DATED APRIL, 1902, MADE BY THE BOARD OF TRADE AS REGARDS ELECTRICAL POWER (LORAIN SURFACE CONTACT SYSTEM) ON THE WOLVERHAMPTON CORPORATION TRAMWAYS.

The Board of Trade, under and by virtue of the powers conferred upon them in this behalf, do hereby make the following Regulations for securing to the public reasonable protection against danger in the exercise of the powers conferred by Parliament with respect to the use of electrical power (Lorain surface contact system) on all or any of the tramways on which the use of such power has been authorised by the Wolverhampton Corporation Act, 1899 (hereinafter called "the tramways").

And the Board of Trade do also hereby make the following byelaws with regard to the use of electrical power on all or any of such tramways worked on the Lorain surface contact system.

#### *Regulations.*

I. Each motor carriage used on the tramways shall comply with the following requirements, that is to say:—

- (a.) It shall be fitted, within six months from the date of these Regulations, or such further period as the Board of Trade may prescribe, with an apparatus to indicate to the driver the speed at which it is running.
- (b.) The wheels shall be fitted with brake blocks, which can be applied by a screw or treadle, or by other means, and there shall be in addition an adequate electric brake.
- (c.) It shall be numbered inside and outside, and the number shall be shown in conspicuous parts thereof.
- (d.) It shall be fitted with a suitable fender, which will act efficiently as a life protector, and with a special bell or whistle to be sounded as a warning when necessary.
- (e.) It shall be so constructed as to enable the driver to command the fullest possible view of the road before him.
- (f.) It shall be free from the clatter of machinery, such as to constitute any reasonable ground of complaint either to the passengers or to the public.

II. No trailing carriage shall be used on the tramways.

Regulations—  
Surface Con-  
tact System  
—*contd.*

- III. Every carriage used on the tramways shall be so constructed as to provide for the safety of passengers, and for their safe entrance to, exit from, and accommodation in such carriage, and for their protection from the apparatus used for drawing or propelling the carriage.
- IV. Every carriage on the tramways shall, during the period between one hour after sunset and one hour before sunrise or during fog, carry a lamp so constructed and placed as to exhibit a white light visible within a reasonable distance to the front, and every such carriage shall carry a lamp so constructed and placed as to exhibit a red light visible within a reasonable distance to the rear.
- V. The Board of Trade and their officers may, from time to time, and shall on the application of the local authority of any of the districts through which the said tramways pass, inspect the carriages used on the tramways, and the working arrangements generally, and may, whenever they think fit, prohibit the use on the tramways of any of them which, in their opinion, are not safe for use.
- VI. The speed at which the carriages shall be driven or propelled along the tramways shall not exceed the rate of *eight* miles an hour, and the speed at which the carriages shall pass through facing points, whether fixed or movable, shall not exceed the rate of *four* miles an hour.
- VII. Where any accident by explosion or fire, or any other accident of such kind as to have caused or to be likely to have caused loss of life or personal injury, has occurred in connexion with the electric working of the tramways, immediate notice thereof shall be given to the Board of Trade. (o)

*Penalty.*

**NOTE.**—The Corporation or any person using electrical power on the tramways contrary to any of the above Regulations is, for every such offence, subject to a penalty not exceeding £10; and also in the case of a continuing offence to a further penalty not exceeding £5 for every day during which such offence continues after conviction thereof.

*Byelaws.*

- I. The special bell or whistle shall be sounded by the driver of the carriage from time to time when it is necessary as a warning.
- II. Whenever it is necessary to avoid impending danger, the carriages shall be brought to a standstill.
- III. The entrance to and exit from the carriages shall be by the hindermost or conductor's platform.
- IV. A printed copy of these Regulations and byelaws shall be kept in a conspicuous position inside of each carriage in use on the tramways.

*Penalty.*

**NOTE.**—Any person offending against or committing a breach of any of these byelaws is liable to a penalty not exceeding forty shillings.

---

(o) For Forms provided by the Board of Trade for Return of Accidents, see *post*, p. 401. See also Notice of Accidents Act, 1894 (57 & 58 Vict. c. 28).

The provisions of the Summary Jurisdiction Acts, with respect to the recovery of penalties, are applicable to the penalties for the breach of these Regulations or byelaws.

Signed by order of the Board of Trade, this                      day of  
April, 1902.

Assistant Secretary,  
Board of Trade.

The underground conduit system has been sanctioned in the case of Bournemouth under the powers of the usual clause relating to motive power. In that case Regulations have been made under the Model Clause relating to electrolytic action (see *ante*, p. 868); but up to the present time no special Regulations have been made under the clause relating to motive power.

Underground  
conduit  
system.

The following is the Form of Regulations at present generally in use at the Board of Trade in and since 1894 under the Model Clause :—

## REGULATIONS

MADE BY THE BOARD OF TRADE UNDER THE PROVISIONS OF THE TRAMWAYS ACT, FOR REGULATING THE EMPLOYMENT OF INSULATED RETURNS, OR OF UNINSULATED METALLIC RETURNS OF LOW RESISTANCE; FOR PREVENTING FUSION OR INJURIOUS ELECTROLYTIC ACTION OF OR ON GAS OR WATER PIPES OR OTHER METALLIC PIPES, STRUCTURES, OR SUBSTANCES; AND FOR MINIMISING AS FAR AS IS REASONABLY PRACTICABLE INJURIOUS INTERFERENCE WITH THE ELECTRIC WIRES, LINES, AND APPARATUS OF PARTIES OTHER THAN THE COMPANY, AND THE CURRENTS THEREIN, WHETHER SUCH LINES DO OR DO NOT USE THE EARTH AS A RETURN (p).

Stock Regula-  
tions as to  
electrolytic  
action.

### *Definitions.*

In the following regulations—

The expression "energy" means electrical energy.

The expression "generator" means the dynamo or dynamos or other electrical apparatus used for the generation of energy.

The expression "motor" means any electric motor carried on a car and used for the conversion of energy.

The expression "pipe" means any gas or water pipe or other metallic pipe, structure, or substance.

The expression "wire" means any wire or apparatus used for telegraphic, telephonic, electrical signalling, or other similar purposes.

---

(p) The Board of Trade will be prepared to consider the issue of regulations for the use of alternating currents for electrical traction on application.

Regulations  
under Model  
Clause—  
*contd.*

The expression "current" means an electric current exceeding one thousandth part of one ampère.

The expression "the company" has the same meaning as in the Tramways Act.

*Regulations.*

1. Any dynamo used as a generator shall be of such pattern and construction as to be capable of producing a continuous current without appreciable pulsation.
2. One of the two conductors used for transmitting energy from the generator to the motors shall be in every case insulated from earth, and is herein-after referred to as the "line"; the other may be insulated throughout, or may be uninsulated in such parts and to such extent as is provided in the following Regulations, and is herein-after referred to as the "return."
3. Where any rails on which cars run or any conductors laid between or within three feet of such rails form any part of a return, such part may be uninsulated. All other returns or parts of a return shall be insulated, unless of such sectional area as will reduce the difference of potential between the ends of the uninsulated portion of the return below the limit laid down in Regulation 7.
4. When any uninsulated conductor laid between or within three feet of the rails forms any part of a return, it shall be electrically connected to the rails at distances apart not exceeding 100 feet by means of copper strips having a sectional area of at least one-sixteenth of a square inch, or by other means of equal conductivity.
5. When any part of a return is uninsulated it shall be connected with the negative terminal of the generator, and in such case the negative terminal of the generator shall also be directly connected, through the current-indicator herein-after mentioned, to two separate earth connections which shall be placed not less than 20 yards apart.

Provided that in place of such two earth connections the company may make one connection to a main for water supply of not less than three inches internal diameter, with the consent of the owner thereof and of the person supplying the water, and provided that where from the nature of the soil or for other reasons, the company can show to the satisfaction of an inspecting officer of the Board of Trade that the earth connections herein specified cannot be constructed and maintained without undue expense the provisions of this Regulation shall not apply.

The earth connections referred to in this Regulation shall be constructed, laid, and maintained so as to secure electrical contact with the general mass of earth, and so that an electro-motive force, not exceeding four volts, shall suffice to produce a current of at least two amperes from one earth connection to the other through the earth, and a test shall be made at least once in every month to ascertain whether this requirement is complied with.

No portion of either earth connection shall be placed within six feet of any pipe except a main for water supply of not less than three inches internal diameter which is metallically connected to the earth connections with the consents herein-before specified.

*When the generator is at a considerable distance from the tramway the uninsulated return shall be connected to the negative terminal of*

*the generator by means of an insulated return conductor, and the generator shall have no other connection with earth; and in such case the end of the insulated return connected with the uninsulated return shall be connected also through a current indicator to two separate earth connections, or with the necessary consents to a main for water supply, or with the like consents to both in the manner prescribed in this regulation (q).*

Regulations  
under Model  
Clause—  
contd.

*If the current indicator cannot conveniently be placed at the connection of the uninsulated return with the insulated return, this instrument may consist of an indicator at the generating station connected by insulated wires to the terminals of a resistance interposed between the return and the earth connection or connections. The said resistance shall be such that the maximum current laid down in Regulation 6 (i.) shall produce a difference of potential not exceeding one volt between the terminals. The indicator shall be so constructed as to indicate correctly the current passing through the resistance when connected to the terminals by the insulated wire before-mentioned (q).*

6. When the return is partly or entirely uninsulated the Company shall in the construction and maintenance of the tramway (a) so separate the uninsulated return from the general mass of earth, and from any pipe in the vicinity; (b) so connect together the several lengths of the rail; (c) adopt such means for reducing the difference produced by the current between the potential of the uninsulated return at any one point and the potential of the uninsulated return at any other point; and (d) so maintain the efficiency of the earth connections specified in the preceding regulations as to fulfil the following conditions, viz. :—

- (i.) That the current passing from the earth connections through the indicator to the generator or *through the resistance to the insulated return (r)* shall not at any time exceed either two amperes per mile of single tramway line or five per cent. of the total current output of the station.
- (ii.) That if at any time and at any place a test be made by connecting a galvanometer or other current-indicator to the uninsulated return and to any pipe in the vicinity, it shall always be possible to reverse the direction of any current indicated by interposing a battery of three Leclanché cells connected in series if the direction of the current is from the return to the pipe, or by interposing one Leclanché cell if the direction of the current is from the pipe to the return.

In order to provide a continuous indication that the condition (i.) is complied with, the Company shall place in a conspicuous position a suitable, properly connected, and correctly marked current-indicator, and shall keep it connected during the whole time that the line is charged.

The owner of any such pipe may require the Company to permit him at reasonable times and intervals to ascertain by test that the

(q) The two paragraphs in italics were added by the Board of Trade in August, 1901.

(r) The words italicised were added by the Board of Trade in August, 1901.

Regulations  
under Model  
Clause—  
*contd.*

conditions specified in (ii.) are complied with as regards his pipe.

7. When the return is partly or entirely uninsulated a continuous record shall be kept by the Company of the difference of potential during the working of the tramway between the points of the uninsulated return furthest from and nearest to the generating station. If at any time such difference of potential exceeds the limit of seven volts, the Company shall take immediate steps to reduce it below that limit.
8. Every electrical connection with any pipe shall be so arranged as to admit of easy examination, and shall be tested by the Company at least once in every three months.
9. Every line and every insulated return or part of a return except any feeder shall be constructed in sections not exceeding one-half of a mile in length, and means shall be provided for isolating each such section for purposes of testing.
10. The insulation of the line and of the return when insulated, and of all feeders and other conductors, shall be so maintained that the leakage current shall not exceed one hundredth of an ampère per mile of tramway. The leakage current shall be ascertained daily before or after the hours of running when the line is fully charged. If at any time it should be found that the leakage current exceeds one-half of an ampère per mile of tramway the leak shall be localised and removed as soon as practicable, and the running of the cars shall be stopped unless the leak is localised and removed within 24 hours. Provided that where both line and return are placed within a conduit this Regulation shall not apply.
11. The insulation resistance of all continuously insulated cables used for lines, for insulated returns, for feeders, or for other purposes, and laid below the surface of the ground, shall not be permitted to fall below the equivalent of 10 megohms for a length of one mile. A test of the insulation resistance of all such cables shall be made at least once in each month.
12. Where in any case in any part of the tramway the line is erected overhead and the return is laid on or under the ground, and where any wires have been erected or laid before the construction of the tramway in the same or nearly the same direction as such part of the tramway, the Company shall, if required so to do by the owners of such wires or any of them, permit such owners to insert and maintain in the Company's line one or more induction-coils or other apparatus approved by the Company for the purpose of preventing disturbance by electric induction. In any case in which the Company withhold their approval of any such apparatus the owners may appeal to the Board of Trade, who may, if they think fit, dispense with such approval.
13. Any insulated return shall be placed parallel to and at a distance not exceeding three feet from the line when the line and return are both erected overhead, or eighteen inches when they are both laid underground.
14. In the disposition, connections, and working of feeders the Company shall take all reasonable precautions to avoid injurious interference with any existing wires.



Regulations  
under Model  
Clause—  
*contd.*

15. The Company shall so construct and maintain their system as to secure good contact between the motors and the line and return respectively.
16. The Company shall adopt the best means available to prevent the occurrence of undue sparking at the rubbing or rolling contacts in any place and in the construction and use of their generator and motors.
17. In working the cars the current shall be varied as required by means of a rheostat containing at least 20 sections, or by some other equally efficient method of gradually varying resistance.
18. Where the line or return or both are laid in a conduit the following conditions shall be complied with in the construction and maintenance of such conduit :—
  - (a.) The conduit shall be so constructed as to admit of easy examination of and access to the conductors contained therein and their insulators and supports.
  - (b.) It shall be so constructed as to be readily cleared of accumulation of dust or other *débris*, and no such accumulation shall be permitted to remain.
  - (c.) It shall be laid to such falls and so connected to sumps or other means of drainage, and to automatically clear itself of water without danger of the water reaching the level of the conductors.
  - (d.) If the conduit is formed of metal, all separate lengths shall be so jointed as to secure efficient metallic continuity for the passage of electric currents. Where the rails are used to form any part of the return they shall be electrically connected to the conduit by means of copper strips having a sectional area of at least one-sixteenth of a square inch, or other means of equal conductivity, at distances apart not exceeding 100 ft. When the return is wholly insulated and contained within the conduit, the latter shall be connected to earth at the generating station through a high resistance galvanometer suitable for the indication of any contact or partial contact of either the line or the return with the conduit.
  - (e.) If the conduit is formed of any non-metallic material not being of high insulating quality and impervious to moisture throughout, and is placed within six feet of any pipe, a non-conducting screen shall be interposed between the conduit and the pipe, of such material and dimensions as shall provide that no current can pass between them without traversing at least six feet of earth, or the circuit itself shall in such case be lined with bitumen or other non-conducting damp-resisting material in all cases where it is placed within six feet of any pipe.
  - (f.) The leakage current shall be ascertained daily, before or after the hours of running, when the line is fully charged, and if at any time it shall be found to exceed half an ampère per mile of tramway the leak shall be localised and removed as soon as practicable, and the running of the cars shall be stopped unless the leak is localised and removed within twenty-four hours.
19. The Company shall, so far as may be applicable to their system of working, keep records as specified below. These records shall, if and when required, be forwarded for the information of the Board of Trade.

Regulations  
under Model  
Clause—  
*contd.*

*Daily Records.*

No. of cars running.  
Maximum working currents.  
Maximum working pressure.  
Maximum current from the earth connections (*vide* Regulations 6 (i.)).  
Leakage current (*vide* Regulations 10 and 18 (f)).  
Fall of potential in return (*vide* Regulation 7).

*Monthly Records.*

Condition of earth connections (*vide* Regulation 5).  
Insulation resistance of insulated cables (*vide* Regulation 11).

*Quarterly Records.*

Conductance of joints to points (*vide* Regulation 8).

*Occasional Records.*

Any tests made under provisions of Regulation 6 (ii.).  
Localisation and removal of leakage, stating time occupied.  
Particulars of any abnormal occurrence affecting the electric working of the tramway.

March 6th, 1894.

Board of Trade,  
7, Whitehall Gardens, S.W.

Surface con-  
tact system.

In the case of Wolverhampton the surface contact system has been sanctioned by the Board of Trade. Regulations have been made by the Board of Trade dealing with the subject of the safety of the public under the authority of the usual clause relating to Motive Power. See *ante*, p. 376. The stock Regulations, *ante*, p. 383, have been made to apply to this system.

Underground  
conduit  
system.

In the case of the Bournemouth Corporation, a portion of their system of electrical tramways is worked upon the underground conduit system. In that case the provisions contained in No. 18 of the stock Regulations appearing above are varied to meet the requirements of the particular case. The following is Regulation 18 in that case. It will be observed it is the same except that paragraph (e) is altered and paragraphs (f) and (g) are added :—

Bournemouth  
Regulations.

18. Where the line or return or both are laid in a conduit the following conditions shall be complied with in the construction and maintenance of such conduit :—
- (a.) The conduit shall be so constructed as to admit of examination of and access to the conductors contained therein and their insulators and supports.
  - (b.) It shall be so constructed as to be readily cleared of accumulation of dust or other *débris*, and no such accumulation shall be permitted to remain.

- (c.) It shall be laid to such falls, and so connected to sumps, or other means of drainage, as to automatically clear itself of water without danger of the water reaching the level of the conductors.
- (d.) If the conduit is formed of metal, all separate lengths shall be so jointed as to secure efficient metallic continuity for the passage of electric currents. Where the rails are used to form any part of the return, they shall be electrically connected to the conduit by means of copper strips having a sectional area of at least one-sixteenth of a square inch, or other means of equal conductivity, at distances apart not exceeding 100 feet. Where the return is wholly insulated and contained within the conduit, the latter shall be connected to earth at the generating station through a high resistance galvanometer suitable for the indication of any contact or partial contact of either the line or the return with the conduit.
- (e.) If the conduit is formed of any non-metallic material not being of high insulating quality and impervious to moisture throughout, the conductors shall be carried on insulators the supports for which shall be in metallic contact with one another throughout.
- (f.) Each conductor shall be connected with earth at the generating station by a voltmeter and shall not otherwise be permanently connected with earth.
- (g.) The conductors shall be constructed in sections not exceeding one-half of a mile in length, and in the event of a leak occurring on either conductor that conductor shall at once be connected with the negative pole of the dynamo and shall remain so connected until the leak can be removed.
- (h.) The leakage current shall be ascertained daily, before or after the hours of running when the line is fully charged, and if at any time it shall be found to exceed one ampère per mile of tramway, the leak shall be localised and removed as soon as practicable, and the running of the cars shall be stopped unless the leak is localised and removed within twenty-four hours.

Bournemouth  
Regulations—  
Underground  
Conduit  
System.

In the volume of Statutory Rules and Orders for 1901, at pages 558—9, will be found a list of Regulations made during the year by the Board of Trade under the provisions of various Tramways Acts and Orders and certain Light Railway Orders as to the use of Mechanical and Electrical Power. It is stated that of these thirty-three related to the use of electrical power on the Overhead Trolley System, and the rest (thirty-three) “were made under the provisions of specified sections of the Acts or Orders authorising the particular undertakings, and are directed to regulating the use of electrical power, to preventing fusion or injurious electrolytic action of or on gas or water pipes, or other metallic pipes, structures or substances, and for minimising injurious interference with the wires and apparatus of parties other than the undertakers.”

In Acts of Parliament, but not in Provisional Orders, the following clause is generally to be found :—

Attachment  
of brackets to  
buildings.

The *Company* may, with the consent of the owner of any building, attach to that building such brackets, wires, and apparatus as may be required for the working of the tramways by mechanical power ;  
Provided that—

- (1) Where, in the opinion of the *Company*, any consent under this section is unreasonably refused, they may appeal to a petty sessional court, who shall have power, having regard to the character of the building and to the other circumstances of the case, to allow the attachment subject to such terms as to compensation or rent and otherwise as they may think reasonable, or to disallow the same, and may determine by which of the parties the costs of the appeal are to be paid.
- (2) Any consent of an owner and any order of a petty sessional court under this section shall not have effect after that owner ceases to be in possession of the building, but any attachments fixed under the provisions of this section shall not be removed until the expiration of three months after any subsequent owner shall have given to the *Company* notice in writing requiring the attachments to be removed. Where such notice is given the preceding provisions of this section shall apply, and the petty sessional court shall have the same powers as under proviso (1).
- (8) The owner may require the *Company* to temporarily remove the attachments where necessary during any reconstruction or repair of the building.

For the purpose of this section any occupier of a building whose tenancy exceeds one year unexpired, and in the case of any other tenancy the person receiving the rackrent, shall be deemed to be the owner.

Byelaws.

The following clause, in relation to byelaws, occurs in Tramway Acts and Provisional Orders :—

Subject to the provisions of this Act, the Board of Trade may make byelaws with regard to any of the tramways upon which mechanical power may be used for all or any of the following purposes ; that is to say,—

- For regulating the use of any bell, whistle, or other warning apparatus fixed to the engine or carriages :
- For regulating the emission of smoke or steam from engines used on the tramways :
- For providing that engines and carriages shall be brought to a stand at the intersection of cross streets, and at such places, and in such cases of horses being frightened, or of impending danger, as the Board of Trade may deem proper for securing safety :
- For regulating the entrance to, exit from, and accommodation in the carriages used on the tramways, and the protection of passengers from the machinery of any engine used for drawing or propelling such carriages :
- For providing for the due publicity of all byelaws and Board of Trade Regulations in force for the time being in relation to the tramways

by exhibition of the same in conspicuous places on the carriages and elsewhere.

Any person offending against or committing a breach of any of the bye-laws made by the Board of Trade under the authority of this Act, shall be liable to a penalty not exceeding forty shillings.

In Acts of Parliament authorising the construction of tramways to be worked by electricity or mechanical power, a section (see Tramway (Construction) Model Bill, Clause 8), to the effect that in addition to the requirements of sect. 26 of the Tramways Act, 1870 (relating to the breaking up of streets), the company shall, at the same time,

Plan of mode of construction, etc., to be laid before the Board of Trade.

“lay before the Board of Trade a plan showing the proposed mode of constructing, laying down, maintaining, and renewing such tramways, and a statement of the materials intended to be used therein; and the company shall not commence the construction, laying down, maintenance and renewal of any of the tramways, or part of any of the tramways respectively, until such plan and statement have been approved by the Board of Trade; . . .”

With regard to the approval by the Board of Trade of the plan and statement relating to the rail and substructure of a tramway, the following requirements of the Board of Trade have to be complied with:—

**REQUIREMENTS, IN CASES OF APPLICATION TO THE BOARD OF TRADE, FOR THEIR APPROVAL OF THE PLAN AND STATEMENT RELATING TO THE RAIL AND SUBSTRUCTURE OF A TRAMWAY.**

There should be forwarded to the Board of Trade:—

1. A drawing (in duplicate), consisting of a full-sized section of the proposed rail; and a full-sized plan and elevation of the same, extending for about nine inches on each side of the joint, and showing how the joint is proposed to be secured, and the electrical bonding.

There should be a statement on the drawing of the material, weight, and length of the proposed rail and fish-plates, and of the depth and width of the groove; also whether the Tramway is to be worked by mechanical power.

2. A drawing, on a scale of two inches to the foot (in duplicate), consisting of a plan, cross section, and longitudinal section of the permanent way and substructure of the tramway, and showing the mode of fixing the rails and chairs (if any), and the gauge ties (if any).

There should be a statement on this drawing of the nature of the paving proposed to be adopted between the rails, and for a distance of eighteen inches on the outside of the rails.

There should also be on this drawing a plan, on a scale of one inch to the foot, of the points proposed to be employed at single line passing places and junctions.

The drawings in each case should be on tracing linen.

Require-  
ments as to  
plan, etc., of  
construction  
—*contd.*

8. The names and addresses of the Road Authorities, with a copy of the undermentioned notice endorsed with the date and manner of service.
4. Tracings of the above drawings should also be served upon the Road Authorities, with a notice that any objections or representations may be brought before the Board of Trade within ten days from the date of such service.

The Board of Trade,  
(Railway Department),  
Whitehall Gardens.

---

### TRAMWAYS.

#### BOARD OF TRADE MEMORANDUM ON CERTAIN MATTERS.

##### *Clearance.*

The space between the inner rails of a double line must to some extent depend upon the overhang of the cars. It is, however, necessary that there should be at least fifteen inches between the sides of passing cars, and also a similar space between the side of a car and any standing work such as lamp posts, telegraph posts, trolley wire standards (including centre standards for electrical traction) in a street.

The space between the kerb and the nearest rail depends to a great extent on what is shown on the plans deposited when lines were authorised.

On straight roads a minimum distance of eighteen inches between the side of the car and the kerb is desirable, but in exceptional cases a distance of fifteen inches might be allowed for short lengths. On curves a greater space would be required in order to allow for the overhang of the car platform.

Where central poles are used for electric traction any stone kerbing should not be left wide enough at the sides facing the rails to enable any person to stand upon it as a refuge.

##### *Rails.*

For mechanical traction it is generally considered that the weight of rails should not be less than 90lbs. per yard, 100lbs. being preferred.

The groove of the rail should not exceed *one inch* in width.

Board of Trade,  
November, 1900.

Guard wires  
on electric  
tramways.

With regard to Guard Wires on Electric Tramways the Board of Trade in May, 1902, prepared a draft set of Regulations which were submitted to parties interested, and after hearing all that

could be advanced on the subject, the Board of Trade finally, in September, 1902, made and issued the following Regulations:—

Guard wires  
on electric  
tramways.

### GUARD WIRES ON ELECTRIC TRAMWAYS.

#### *Existing Regulation.*

Efficient guard wires shall be erected and maintained at all places where telegraph or telephone wires cross above the electric conductors of the tramways.

#### *Proposed New Regulation.*

If and whenever telegraph or telephone wires, unprotected with a permanent insulating covering, cross above, or are liable to fall upon, or to be blown on to, the electric conductors of the tramways, efficient guard wires shall be erected and maintained at all such places.

#### EXPLANATORY MEMORANDUM.

NOTE.—The expression “telegraph wire” includes all telegraph and telephone wires.

For the purpose of this memorandum, telegraph wires are divided into two classes, namely:—

(a) Wires weighing less than 100 lbs. per mile.

(b) Wires weighing 100 lbs. or more per mile.

Each guard wire should be well earthed at one point at least, and at intervals of not more than five spans. The resistance to earth should be sufficiently low to insure that a telegraph or telephone wire falling on and making contact with the guard wire and the trolley wire at any time will cause the circuit breaker protecting that section to open.

The earth connection should be made by connecting the wire through the support to the rails by means of a copper bond. When first erected, the resistance to earth of the guard wires should be tested, and periodical tests should be made to prove that the earth connection is efficient.

Guard wires should be, in general, of galvanised steel, but in manufacturing districts in which such wires are liable to corrosion bronze or hard drawn copper wires should be used.

The gauge of the guard wire should not be less than seven strands of No. 16 or one of No. 8 wire.

The supports for the guard wires should be rigid and of sufficient strength for their purpose, and at each support each guard wire should be securely bound in or terminated.

The rise of the trolley boom should be so limited that if the trolley leaves the wire it will not foul the guard wires.

#### TELEGRAPH WIRES CROSSING TROLLEY WIRES (s).

##### *Class (a).—Wires weighing less than 100 lbs. per Mile.*

The guard wires may be of the cradle or hammock type, attached to the arms of telegraph poles. It is necessary that the spans should be short; and if required an additional pole or poles should be set.

---

(s) The diagrams which follow are in each case reduced in size.

Guard wires—  
*contd.*

- (1.) Where there is one trolley wire, two guard wires should be erected (Fig. 1).

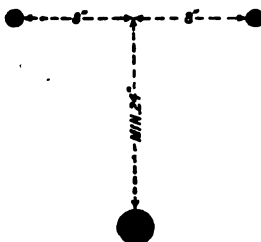


FIG. 1.

- (2.) Where there are two trolley wires at a distance not exceeding 12 feet apart, two guard wires should be erected (Fig. 2).

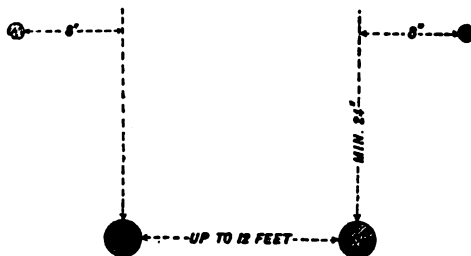


FIG. 2.

- (8.) In special cases, at junctions or curves, where parallel guard wiring would be complicated, two guard wires may be so erected that a falling wire must fall on them before it can fall on the trolley wire.

*Class (b).—Wires weighing 100 lbs. or more per Mile.*

- (4.) Where there is only one trolley wire, two guard wires should be erected (Fig. 3).

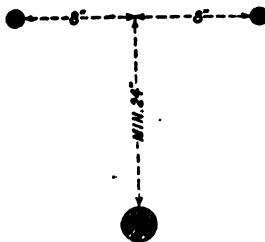


FIG. 3.



- (5.) Where there are two trolley wires not more than 15 inches apart, Guard wires—*contd.*  
two guard wires should be erected (Fig. 4).

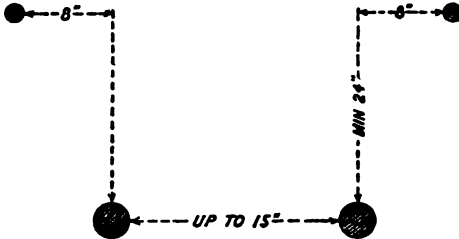


FIG. 4.

- (6.) Where there are two trolley wires and the distance between them exceeds 15 inches, but does not exceed 48 inches, three guard wires should be erected (Fig. 5).

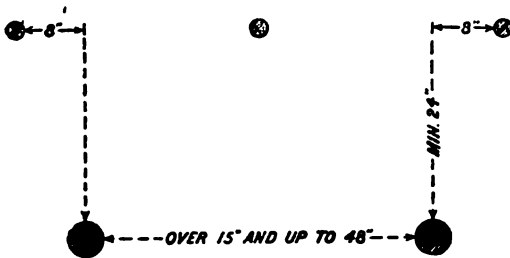


FIG. 5.

- (7.) Where the distance between the two trolley wires exceeds 48 inches, each trolley wire should be separately guarded (Fig. 6).



FIG. 6.

- (8.) It is desirable, where possible, to divert telegraph wires from above trolley junctions and trolley wire crossings, and undertakers should endeavour to make arrangements to that effect with the owners of telegraph wires.

#### TELEGRAPH WIRES PARALLEL TO TROLLEY WIRES.

##### *Classes (a) and (b).*

- (9.) Where telegraph wires not crossing a trolley wire are liable to fall upon or to be blown on to a trolley wire, a guard wire should be so

Guard wires—  
*contd.*

erected that a falling wire must fall on the guard wire before it can fall on the trolley wire.

- (10.) When guard wires are attached to other supports than the trolley poles they should be connected with the rails at one point at least.
- (11.) When it is possible that a telegraph wire may fall on an arm or a stay, or a span wire, and so slide down on to a trolley wire, guard hooks should be provided.

GENERAL.

Minimum guarding requirements for Classes (a) and (b) are provided for in this memorandum, but in exceptional cases, such as in very exposed positions, or for unusually heavy telegraph wires, special precautions should be taken.

Board of Trade,  
7, Whitehall Gardens,  
London, S.W.  
September, 1902.

## (2.) LIGHT RAILWAYS WORKED BY ELECTRICAL POWER.

By the Light Railways Act, 1896 (59 & 60 Vict. c. 48), a Commission, consisting of three Commissioners, to be styled the Light Railway Commissioners, was established, with power to authorise, under the conditions mentioned in the Act, the construction of Light Railways. The Order of the Light Railway Commissioners is provisional only, and has no effect until confirmed by the Board of Trade. When confirmed by the Board of Trade, the Order has effect as if enacted by Parliament (sect. 10). According to the last available return laid before Parliament (June 3rd, 1902, Parliamentary paper No. 198 of 1902), it appears that under Class B. ("lines on public roads mostly electric motive power") 211 applications had been made to the Commissioners since they came into existence; whereof 93 had been approved with a mileage of 497 miles, and the cost, according to the estimate of the engineers, was £4,248,944. Of these it appears that in the result 82 were sent to the Board of Trade for confirmation covering a mileage of 418 miles, the aggregate cost of the works, according to engineers' estimates, being £3,447,990. The following are some of the provisions usually to be found in Light Railway Orders made under the Act of 1896 :—

Provisions relating to electricity, etc., in Light Railway Orders.

Incorporation of the Lands Clauses Acts and power to take land compulsorily if necessary (see *ante*, p. 875) ;

Power to supply electrical energy from any generating station belonging to them and to generate electricity upon land appropriated by them to that use or acquired by them by agreement ; but a provision is added to the effect that nothing in the Order shall exempt the Undertakers from any indictment, action or other proceeding for nuisance in the event of any nuisance being caused or permitted by them upon any land so appropriated or acquired ;

A clause is inserted authorising the Undertakers to acquire by agreement additional land (not exceeding, in the case of companies, a limited number of acres), with a provision as to nuisance similar to that above stated ;

Power, under certain conditions, to lay down and maintain on, in, under, or over any road or the footpath of any road such posts,

Provisions  
in Light  
Railway  
Orders.

conductors, wires, tubes, mains, plates, boxes, and apparatus, as may be necessary or convenient either for working the railway or for forming connections with any generating station. The consent of the road authority is necessary, but is not to be unreasonably withheld. In case of difference there is an appeal to the Board of Trade;

The gauge of the railway is prescribed, with power to alter with the consent of the Board of Trade;

Power to break up roads and streets;

In addition to the requirements of the enactments regarding the breaking up of roads and streets, the Undertakers are required at the same time as they give notice to the road authority, to lay before the Board of Trade a plan (as in the case of tramways; see *ante*, p. 890) showing the proposed mode of making, laying down, maintaining, or renewing the railway, and a statement of the materials intended to be used, and the works are not to be commenced until such plan and statement have been approved by the Board of Trade;

The size, position, design and construction of all posts, standards and brackets, and their several attachments erected in any road or footpath, are to be subject to the approval of the road authority, with appeal to the Board of Trade;

Protection of railway companies;

Protection of gas and water pipes in connection with the making, laying down, and maintaining, repairing, or renewing the railway. Nothing in this section shall apply in the case of any electric lines or works of any undertakers the position of which may be altered under s. 15 of the Electric Lighting Act, 1882;

Purchase and sale of the undertaking.

Motive  
power.

The following clause on the subject of motive power is taken from a recent Order (the Clacton-on-Sea and St. Osyth Light Railway Order, 1902):—

The carriages used on the railway may be moved by animal power or by mechanical power subject to the following provisions; that is to say—

- (a) No mechanical power shall be used except with the consent of and according to a system approved by the Board of Trade;
- (b) No animal power nor mechanical other than electric power shall be used except with the consent of the local authority and of the road authority, but that consent in the case of animal power shall not be unreasonably withheld, and any difference which arises as to whether such consent is unreasonably withheld shall be referred to arbitration under this Order.

Board of  
Trade  
Regulations.

Authority is always given to the Board of Trade to prescribe Regulations for securing to the public and to passengers all reasonable protection against danger arising from the use of

mechanical power on the railway. The clause is generally in the following form:—

- (1) The Board of Trade shall make Regulations (in this Order referred to as "Board of Trade General Regulations") for securing to the public and to passengers all reasonable protection against danger arising from the use under this Order of mechanical power on the railway and in particular may by those Regulations make provision for all or any of the following purposes: (that is to say)—
- Board of  
Trade to make  
Regulations.
- For regulating the rate of speed to be observed in travelling on the railway;
  - For regulating the number of carriages which may be run upon the railway coupled together;
  - For regulating the use of any bell whistle or other warning apparatus fixed to the engines or carriages;
  - For regulating the lights which the *Company* shall fix and maintain on or in the trains or carriages used on the railway;
  - For regulating the dimensions, form and mode of construction of carriages;
  - For regulating the emission of smoke or steam from engines used on the railway;
  - For requiring the provision of brakes and other fittings including fenders and cow-catchers on the engines used on the railway;
  - For providing that engines and carriages shall be brought to a stand at any special points or under any special circumstances;
  - For regulating the entrance to exit from and accommodation in the carriages used on the railway and the protection of passengers from the machinery of any engine used for drawing or propelling such carriages;
  - For providing for the due publicity of all Board of Trade Regulations (whether General or Special) and of all byelaws in force in relation to the railway by exhibition of the same in conspicuous places on the carriages and elsewhere.
- (2) The Board of Trade shall make Regulations (in this Order referred to as "Board of Trade Special Regulations") for regulating the use of electric power on or in connection with the railway and in particular shall by those Regulations make provision with respect to such matters as are to be prescribed or provided for under the special provisions of this Order as to the use of electric power as motive power.
- (8) If the Board of Trade are of opinion—
- (a) that the *Company* have made default in complying with the provisions of this Order or of the Board of Trade General or Special Regulations whether a penalty in respect of such non-compliance has or has not been recovered; or—
  - (b) that the use of any mechanical power as authorised under this Order is a danger to the passengers or the public—
- they may by order either direct the *Company* to cease to use such power or permit the use thereof to be continued only subject to such conditions as the Board of Trade may impose and the *Company* shall comply with every such order.
- (4) If the *Company* use mechanical power on the railway contrary to the

provisions of this Order or of the Board of Trade General or Special Regulations or refuse or neglect to comply with any order made under this section they shall for every such offence be liable to a penalty not exceeding ten pounds and also in the case of a continuing offence to a further penalty not exceeding five pounds for every day during which the offence is continued after conviction thereof ;

- (5) Any company body or person owning working or running carriages on the railway or on any portion thereof shall be subject to the provisions of this section (including the penal provisions thereof) in the same manner and to the same extent as the *Company*.

Leakage and electrolysis.

The Model Clause (special provisions as to the use of electrical power) is always inserted. See the Form, *ante*, p. 368. Under this clause also the Board of Trade are authorised to make Regulations. A clause for the protection of the Postmaster-General is also inserted.

Regulations made by Board of Trade.

The Board of Trade have, under the authority of various Light Railway Orders, made Regulations applicable to each individual case. From the Statutory Rules and Orders, 1901, at p. 559, it appears that Regulations as to the use of electrical power were sanctioned in nine cases in that year. All of them related to the use of electrical power on the overhead trolley system. The form of Regulations follow those in use in the case of Tramways *mutatis mutandis*.

Electrolytic action on gas and water pipes.

On the subject of injury to gas and water mains and pipes see the Chapter on LEAKAGE AND ELECTROLYSIS, *ante*, p. 339.

### (3.) RETURN OF ACCIDENTS BY TRAMWAYS AND LIGHT RAILWAYS.

Return to Board of Trade of accidents in the case of Tramways and Light Railways.

By Regulation XV., *ante*, p. 880, and Regulation VII., *ante*, p. 382 (see further as to notice of accidents, *ante*, pp. 49, 52 and 54), the Board of Trade provide that where any accident by explosion or fire, or any other accident of such kind as to have caused or to be likely to have caused loss of life or personal injury has occurred in connection with the electric working of the tramways, immediate notice thereof shall be given to the Board of Trade. The following Forms of Return have been issued by the Board of Trade in regard to Electrical Accidents and General Accidents respectively.

## TRAMWAYS AND LIGHT RAILWAYS ON PUBLIC ROADS.

## RETURN OF ACCIDENTS (ELECTRICAL)

For the Month of \_\_\_\_\_ 190\_\_\_\_\_.

(To be forwarded to the Assistant Secretary, Railway Department, Board of Trade, S. W.)

NOTE.—Accidents causing death or serious personal injury should be reported forthwith, other accidents monthly.

## ELECTRICAL ACCIDENTS.

NAME OF LINE \_\_\_\_\_

Nature of Accident.	Date and Time.	Place.	Damage or personal injury (if any).	• Further particulars and remarks.
a. Guard wire pulled down by trolley.				
b. Trolley wire pulled down by trolley.				
c. Overhead work broken by trolley.				
d. Trolley head pulled off.				
e. Trolley standard damaged by trolley jumping.				
f. Trolley boom pulled out or broken by trolley jumping.				
g. Miscellaneous damage done by trolley jumping.				
1. Trolley jumping and causing damage:—				
2. Guard wire falling on trolley wire.				
3. Trolley wire dropping without breaking.				
4. Trolley wire breaking and falling.				
5. Short circuit on feeder.				
6. Failure of insulation.				
7. Other classes of accident.				

\* N.B.—Any return respecting the failure of a trolley wire should be accompanied by remarks as to the probable cause of the failure, i.e., whether undue tension, blow from trolley, or overheating in soldering, together with a statement of the material; the appearance of the fracture should also be described.

(Signature) \_\_\_\_\_  
Date) \_\_\_\_\_ 190\_\_\_\_\_.

## TRAMWAYS AND LIGHT RAILWAYS ON PUBLIC ROADS.

## RETURN OF ACCIDENTS (GENERAL)

For the Month of \_\_\_\_\_ 190\_\_\_\_\_.

*(To be forwarded to the Assistant Secretary, Railway Department, Board of Trade, S.W.)*

Entries in the column headed "Nature of Accident" should show under which of the following heads the several accidents fall, viz. :—

- |  |   |
|--|---|
| 1. Collisions between two cars.                | 4. Cars derailed.   |
| 2. Collisions between cars and other vehicles. | 5. Passengers or persons in road knocked down or injured. |
| 3. Cars running away.                          | 6. Other classes of accident.                             |

Accidents should, so far as possible, be grouped under these heads, in order of date.

Accidents causing death or serious personal injury should be reported forthwith ; other accidents monthly.

## GENERAL ACCIDENTS.

## NAME OF LINE \_\_\_\_\_

Date and Time.	Nature of Accident. (See Instructions.)	Place and Road (state also whether single or double line or a passing-place).	Gradient.	Type of Car and name of Life-guard, and how it acted.	Nature of Brakes and how they acted.	Speed of Car at time of Accident.	Damage or personal injury (if any).	Cause of Accident and General Remarks.

Signature \_\_\_\_\_

(Date) \_\_\_\_\_



### III. TUBE AND OTHER RAILWAYS AUTHORISED TO BE WORKED BY ELECTRICAL POWER.

#### (1.) THE VARIOUS COMPANIES SO AUTHORISED.

<i>Charing Cross and Waterloo Electric Railway Act, 1882</i> .....	Page 404
<i>City and South London Railway Acts, 1884, 1887, 1890, 1898, 1895, 1898, 1901</i> .....	p. 404
<i>Central London Railway Acts, 1891, 1892, 1894, 1899, 1900, 1901, 1902</i> .....	p. 405
<i>Great Northern and City Railway Acts, 1892, 1895, 1897, 1902</i> ..	p. 405
<i>Baker Street and Waterloo Railway Acts, 1898, 1898, 1899, 1900, 1902</i> .....	p. 406
<i>Waterloo and City Railway Act, 1898</i> .....	p. 406
<i>Charing Cross, Euston and Hampstead Railway Acts, 1898, 1894, 1897, 1898, 1899, 1901, 1902</i> .....	p. 407
<i>Vale of Rhaidol Light Railway Acts, 1897, 1900</i> .....	p. 407
<i>Brompton and Piccadilly Circus Railway Acts, 1897, 1899, 1900, 1902</i> .....	p. 408
<i>City and Brixton Railway Acts, 1898, 1899, 1901</i> .....	p. 409
<i>Metropolitan District Railway Acts, 1897, 1900, 1901, 1902</i> .....	p. 409
<i>Metropolitan Railway Acts, 1898, 1902</i> .....	p. 411
<i>Whitechapel and Bow Railway Acts, 1897, 1902</i> .....	p. 411
<i>Caledonian Railway Act, 1898</i> .....	p. 412
<i>Great Northern and Strand Railway Acts, 1899, 1902</i> .....	p. 412
<i>North-West London Railway Acts, 1899, 1902</i> .....	p. 413
<i>Wirral Railway Act, 1900</i> .....	p. 413
<i>Mersey Railway Act, 1900</i> .....	p. 413
<i>South-Eastern and London, Chatham and Dover Railway Company's Act, 1900, 1902</i> .....	p. 414
<i>Bray and Enniskerry Railway Act, 1900</i> .....	p. 414
<i>South-Western and Isle of Wight Junction Railway Act, 1901</i> ..	p. 414
<i>Cork, Blackrock and Passage Railway Act, 1901</i> .....	p. 414
<i>Portmadoc, Beddgelert and South Snowdon Railway Act, 1901</i> ..	p. 415
<i>Manchester and Liverpool Electric Express Railway Act, 1901</i> ..	p. 415
<i>Liverpool Overhead Railways, 1878, 1882, 1887, 1888, 1889, 1892, 1899</i> .....	p. 416
<i>Edgware and Hampstead Railway Act, 1902</i> .....	p. 417
<i>Donegal Railway Act, 1902</i> .....	p. 417
<i>London, Tilbury and Southend Railway Act, 1902</i> .....	p. 417
<i>North and South Shields Electric Railway Act, 1902</i> .....	p. 417

Charing Cross  
and Waterloo  
Electric  
Railway Act,  
1882.

By the Charing Cross and Waterloo Electric Railway Act, 1882 (45 & 46 Vict. ch. cclv.), a company was incorporated and empowered to construct a railway (underground) from Charing Cross to the Waterloo Station of the London and South-Western Railway and to be called the Charing Cross and Waterloo Electric Railway. By sect. 39 it was provided that "The company shall not be entitled to use steam power upon the railway nor any mechanical motive power other than such as can be provided by electric means or apparatus." By the Charing Cross and Waterloo Electric Railway (Abandonment) Act, 1885, the abandonment of the railway was authorised. This Act proceeded on the recital that no portion of the authorised capital had been raised and none of the powers of the Act of 1882 in relation to the compulsory purchase of lands and making of the railway had been exercised.

City and  
South London  
Railway Acts,  
1884—1901.

The City of London and Southwark Subway was authorised by an Act of 1884 (47 & 48 Vict. ch. clxvii.). It contained power to divide the shares into preferred and deferred; a general power to underpin houses and buildings within 100 feet of the subway; the carriages to be propelled by means other than steam locomotives, as the Board of Trade may from time to time approve. By an Act of 1887 (50 & 51 Vict. ch. cv.) the company obtained an extension to Kennington and Stockwell, and by an Act of 1890 (53 & 54 Vict. ch. cxiv.) the company's name became changed to the City and South London Railway Company: an extension to Clapham was authorised; and a clause in the Act of 1887, for the protection of the Postmaster-General, was repealed and a more stringent clause inserted for that purpose, as also a clause for the protection of the National Telephone Company. In 1893 the City and South London Railway Company came to Parliament for an extension to Islington, and by an Act (56 & 57 Vict. ch. ccxvii.) that extension was authorised. The Model Clause (special provisions as to the use of electrical power) was inserted in the Act, as were also various clauses for the protection of the Postmaster-General and various electric lighting, gas, water, railway, and other companies and parties. The company also obtained extension or amending Acts in 1895 (58 Vict. ch. xix.); 1896 (59 & 60 Vict. ch. cclii.); 1898 (61 Vict. ch. xi.); 1900 (63 Vict. ch. v.); and in 1901 (1 Edw. 7, ch. lxvi.).

The next tube railway to be sanctioned was the Central London Railway, authorised by an Act of 1891 (54 & 55 Vict. ch. cxvii.) from Shepherd's Bush to the Bank. It provided that the carriages should be propelled by electricity, and contained clauses for the protection of the Postmaster-General and the National Telephone Company, and many protective clauses for various banks, insurance companies, railways, landowners and others, including the Gas Light and Coke Company. It also contained power to underpin houses and buildings within 100 feet. The company obtained another Act in 1892 (55 & 56 Vict. ch. cxli.), giving them certain further powers and authorising additional works and containing many protective clauses as in the case of the former Act. Extension or amending Acts were also obtained in 1894 (57 & 58 Vict. ch. lvii.); 1899 (62 & 63 Vict. ch. clxxxv.); 1900 (63 & 64 Vict. ch. xxxvii.); and in 1901 (1 Edw. 7, ch. ccv.). In the Session of 1902 the company applied to Parliament for power to construct a railway from Hammersmith to the City of London, with connections with the existing railways of the company at each end. That Bill contained the Model Clause. As the result of the hearing before a Committee of the House of Lords, all the clauses relating to works were eliminated from the Bill, which subsequently passed unopposed. The Act as passed does not contain the Model Clause (2 Edw. 7, ch. cxlv.).

Central  
London  
Railway Acts,  
1891—1902.

By the Great Northern and City Railway Act, 1892 (55 & 56 Vict. ch. cxlii.), a company was incorporated to construct a railway from the Canonbury branch of the Great Northern Railway Company near Finsbury Park to the City, the motive power being electricity or such other motive power (not being steam locomotives) as the Board of Trade may approve. It contained clauses for the protection of the Postmaster-General and of various companies and interests, with powers to divide shares and underpin. By an Act of 1895 (58 & 59 Vict. ch. cxii.) an extension of time was granted, and by an Act of 1897 (60 & 61 Vict. ch. cxiii.) a further extension of time was granted and various amendments of former enactments made. By an Act of 1902 (2 Edw. 7, ch. ccxxii.) a short extension from Moorgate Street to Lothbury was authorised. By the Great Northern Railway (No. 2) Act, 1902 (2 Edw. 7, ch. cxxvi.), a portion of the railway authorised by the Act of 1892 was abandoned and a

Great  
Northern and  
City Railway  
Acts, 1892—  
1902.

new piece of line in the parish of Islington was authorised to be constructed and leased to and worked by the Great Northern and City Company.

Baker Street  
and Waterloo  
Railway Acts,  
1893—1902.

By an Act of 1893 (56 Vict. ch. iv.) this railway was first sanctioned. It contained a provision to the effect that, "except in the case of unforeseen accident or for the purpose of removing rain-water or other trifling amounts of water, no use shall be made of pumping or other modes of removing water from the work. The compressed air shall be used as hereinbefore provided, and so as to restrain the advent or inflow of water into the tunnels." It authorised the construction of a generating station and stationary engine on lands described, and contained a provision to the following effect: "And the company shall in the construction, erection, and working of such station and engine use all reasonable care to prevent nuisance by vibration." It authorised the traffic on the railways to be worked by electricity or cable power, and contained clauses for the protection of the Postmaster-General, the National Telephone Company, the Gas Light and Coke Company, and various banks, insurance companies, railway companies, and others. It contained power to divide the shares, and to underpin houses and buildings within 100 feet. The company obtained an extension of time Act in 1896 (59 & 60 Vict. ch. ccxxvii.), which contained a clause for the protection of the Postmaster-General. In 1899 the company obtained a further Act (62 & 63 Vict. ch. xcii.) authorising certain deviations and new works. This Act contained the Model Clause, as also various clauses for the protection of gas, water, electric supply, and other companies, as also clauses for the protection of the Postmaster-General and the National Telephone Company. In 1900 the company obtained a further Act (63 & 64 Vict. ch. ccxxv.) authorising further works, and the establishment of a generating station on described land in the parish of St. George the Martyr, Southwark. The Act contained the Model Clause and also various protective clauses. It contained no special provision on the subject of nuisance. See further an Act of the Session of 1902 (2 Edw. 7, ch. cclv.).

Waterloo and  
City Railway  
Act, 1893.

By the Waterloo and City Railway Act, 1893 (56 & 57 Vict. ch. clxxxvii.), a company was incorporated to construct an underground railway from near Waterloo Station to Mansion

House Street, City, the motive power being electricity or cable traction. A generating station was authorised on land shown on deposited plan; the following enactment being added: "And the company shall, in the construction, erection, and working of such station and engine, use all reasonable care to prevent nuisance by vibration." The Act contained clauses for the protection of the Postmaster-General, the National Telephone Company, water, gas, hydraulic power, and electric companies, and various others. The usual powers to divide shares and to underpin were inserted. The company was authorised to enter into working agreements with the London and South-Western Railway Company.

By the Charing Cross, Euston, and Hampstead Railway Act, 1893 (56 & 57 Vict. ch. cxxiv.), a company was authorised and empowered to construct underground railways from Charing Cross to Hampstead, with a branch to Euston Station, the motive power being electricity or such other motive power (not being steam locomotives) as the Board of Trade may approve. The Act contained the Model Clause, and various clauses for the protection of the Postmaster-General, vestries, railways, water, gas, hydraulic power, and electric companies, and various others. The Act contained the usual powers to divide shares and to underpin. By an Act of 1894 (57 & 58 Vict. ch. lxxvi.) the company were empowered to acquire additional lands. By an Act of 1897 (60 Vict. ch. xxxix.) Parliament revived and extended the company's powers for taking land and constructing the authorised railway. An Act of 1898 (61 & 62 Vict. ch. cxiii.) authorised the abandonment of a portion of the authorised railway and the making of an extension. In an Act of 1899 (62 & 63 Vict. ch. cclxiv.) the Model Clause was inserted, and the company were authorised to enter into working agreements with certain railway companies. By an Act of 1900 (63 Vict. ch. x.) the company obtained extension of time and powers. See further an Act of the Session of 1902 (2 Edw. 7, ch. cclvi.).

Charing  
Cross, Euston,  
and Hamp-  
stead Railway  
Acts, 1893—  
1902.

By the Vale of Rheidol Light Railway Act, 1897 (60 & 61 Vict. ch. clxxiv.), a company was incorporated to construct a light railway between Aberystwyth and Devil's Bridge, in the county of Cardigan. By an Act of 1900 (63 & 64 Vict. ch. cii.) power was given to work the authorised railways by electricity or other

Vale of  
Rheidol Light  
Railway Acts,  
1897 and 1900.

motive power, and to enter into agreements with any company, body, or person authorised to supply electricity. The Act contained the Model Clause and a clause for the protection of the Postmaster-General.

Brompton  
and Picca-  
dilly Circus  
Railway Acts,  
1897—1902.

By the Brompton and Piccadilly Circus Railway Act, 1897 (60 & 61 Vict. ch. cxcii.), a company was incorporated and empowered to construct an underground railway from Piccadilly Circus to South Kensington, the motive power being electricity or such other motive power (not being steam power) as the Board of Trade may sanction. The company obtained power to take lands and to construct a generating station on described land, no special provision being inserted in regard to nuisance. It contained the Model Clause, protective clauses in favour of the Postmaster-General, gas, water, hydraulic, electric and telephonic companies, various vestries, railways, and landowners; power to divide their shares, and power to enter into working agreements with the Metropolitan District Railway Company. By an Act of 1899 (62 & 63 Vict. ch. cclxii.) the company were authorised to construct certain additional railways to connect with the railways authorised by the Metropolitan District Railway Act, 1897 (see *post*, p. 409). By sect. 9 the observatory clause was added, it not having been contained in the Model Clause as inserted in the Act of 1897. By sect. 30 the company were authorised to enter into working and traffic agreements with the Metropolitan District Railway Company. By the Metropolitan District Railway Act, 1900 (63 & 64 Vict. ch. cclxxiii.), sect. 61, the time for completion of the railways and purchase of lands authorised by the Brompton and Piccadilly Circus Railway Act, 1897, were extended. By the Brompton and Piccadilly Circus Railway Act of 1902 (2 Edw. 7, ch. cclix.) the Brompton and Piccadilly Circus Company obtained power to construct an additional line joining on to the Great Northern and Strand Railway, authorised in 1899. By the Great Northern and Strand Railway Act, 1902 (2 Edw. 7, ch. ccxxxv.), it was recited in the preamble that it would increase the utility of the undertakings of that company and of the Brompton Company if the same were worked as one undertaking from Finsbury Park to South Kensington. Accordingly by sect. 40 provision is made for the transfer of the Great Northern and Strand undertaking to

the Brompton and Piccadilly Circus Company. See *post*, p. 413.

By the City and Brixton Railway Act, 1898 (61 & 62 Vict. ch. lx.), a company was incorporated and authorised to construct an underground railway, subway and works from the City and South London Railway, in the parish of St. Saviour's, Southwark, to Brixton Hill, to be worked by electric power. The Act contained the Model Clause, also a clause for the protection of the Postmaster-General, and many other protective clauses. It also contained power to divide the shares. In 1899 (62 & 63 Vict. ch. ccxlvii.) the company were authorised to construct a further extension railway, subway and works to connect their authorised railway with the existing generating station and dépôt at Clapham of the City and South London Railway Company. By an Act of 1901 (1 Edw. 7, ch. cclxxv.) the time for the compulsory purchase of the lands required for the construction of the railway (which would expire on July 1st, 1901) was extended until July 1st, 1902, and the company were authorised to enter into working agreements with the City and South London Railway Company.

City and  
Brixton Rail-  
way Acts,  
1898—1901.

By the Metropolitan District Railway Act, 1897 (60 & 61 Vict. ch. ccxlvii.), the Metropolitan District Railway Company were empowered to construct an underground railway from Earl's Court Station to the Mansion House Station, passing for the most part under the existing railway of the company, and empowering the company to work the same by electricity. A generating station was authorised on land described with the following provision:—"And the company shall, in the construction, erection and working of such stations and engines, use all reasonable care to prevent nuisance by vibration." The Act contained the Model Clause and other protective clauses, the usual clause with regard to underpinning, and the protection of the Postmaster-General. By sect. 68 of the Act the company were authorised to work their existing railways by electricity. By an Act of 1900 (63 & 64 Vict. ch. cclxxiii.) this last-mentioned section was repealed and a further power to the same effect substituted by sect. 22. This Act authorised the erection of a generating station at Lot's Road, Chelsea. The Act is silent as to nuisance. By a further Act of 1901 (1 Edw. 7, ch. ccxx.) the company were

Metropolitan  
District Rail-  
way Acts,  
1897—1902.

Metropolitan  
District Rail-  
way—*contd.*

empowered "to provide for the conversion and adaptation of their railways for being worked by electrical power." Section 9 makes special provisions "to secure that the Inner Circle railway, as well as the City lines and extensions railways of the two companies, shall, when worked by electricity, be worked upon a uniform system." The section then enacts that unless within one month after the passing of the Act the two companies shall have agreed to adopt the same system, the matter shall be referred to the Board of Trade, "who shall forthwith appoint a special tribunal consisting of one arbitrator, not being an electrical engineer, and two engineers, one to be appointed by each company, to hear evidence and report to the Board of Trade, who shall determine which system of electrical working shall be applied. . . ."

The companies not having agreed, the Board of Trade appointed a special tribunal, under the powers of the above section, consisting of an arbitrator (Hon. Alfred Lyttelton, K.C., M.P.), and two engineers (Messrs. H. Parshall and Thomas Parker), nominated respectively by each company to hear evidence and report to the Board of Trade. After hearing evidence, and upon report to the Board of Trade, that Board, on December 11th, 1901, issued their decision in the following terms:—

"Whereas, pursuant to sect. 9 of the Metropolitan District Railway Act, 1901, the Board of Trade did, by writing dated the 18th day of September, 1901, appoint the special tribunal referred to in the said section to hear evidence and to report to the Board of Trade as to the system of electrical working which should be applied on the portions of the railways of the Metropolitan District Railway Company and the Metropolitan Railway Company forming part of the Inner Circle Railway, and also on the City lines and extensions railways of the two companies.

"And whereas the said tribunal so appointed has duly made its report to the Board of Trade, and the Board of Trade have considered the same :

"Now, therefore, the Board of Trade, in further pursuance of sect. 9 of the said Act, do hereby determine that the system of electrical working which shall be applied on the portions of each of the said company's railways forming part of the Inner Circle railway, and also on the City lines and extensions railways of the said two companies, shall be the system described in a statement dated September 5th, 1901, signed by the secretary of the Metropolitan District Railway Company and declared and submitted by the said Metropolitan District Railway Company as the system of electrical working which it desired to adopt, and which system may be shortly



described or referred to as the continuous current system of electrical traction."—*Electrician*, December 18th, 1901, p. 287.

Metropolitan  
District Rail-  
way—*contd.*

By the Metropolitan District Railway Act, 1902 (2 Edw. 7, ch. ccxx.), the award of the arbitrator is confirmed, and further provisions are made in connection with the electrification of the line.

By the Metropolitan Railway Act, 1898 (61 & 62 Vict. ch. clxxvii.), s. 25, power was given to work the traffic on the railways of the Metropolitan Railway Company and the Metropolitan District Company by electrical power. By sect. 28 the two companies were empowered to enter into agreements with respect to the working of the traffic by electrical power. By sect. 26 the Metropolitan Company were authorised to erect a generating station on land described. The Act is silent as to nuisance in connection with generating station. Cf. sects. 12 (3), 19 (c) and 24. Section 38 enacted the Model Clause. By the Metropolitan Railway Act, 1902 (2 Edw. 7, ch. clxxii.), the company were authorised to acquire additional lands for generating electricity. These lands are situated in the parish of Willesden, "adjoining or near to their locomotive and carriage works and sidings and the River Brent." There is no special provision in regard to nuisance in connection with this land (sect. 31). Section 14 authorises the acquisition of lands by agreement for the extraordinary purposes mentioned in the Railways Clauses Consolidation Act, 1845, but there is a proviso that nothing shall exempt "from any indictment, action or other proceeding for nuisance. . . ." By sect. 37 power is given to adapt the Hammersmith and City Railway for being worked by electrical power. There are certain sections in the Act relating to the laying of electric mains along other railways (ss. 35, 36, 38, 44). By sect. 41 agreements may be entered into between the company and the District Company as to the supply of electrical energy, or with respect to the ownership, use, management, etc., of generating stations or sub-stations of either of the companies. By sect. 42 agreements may be entered into with any local authority, body, or persons authorised to supply electricity under the conditions therein stated.

Metropolitan  
Railway Com-  
pany's Acts,  
1898—1902.

This line was authorised by the Whitechapel and Bow Railway Act, 1897 (60 & 61 Vict. ch. cclvii.), the motive power being

Whitechapel  
and Bow Rail-  
way Acts,  
1897—1902.

Whitechapel  
and Bow Rail-  
way—*contd.*

“steam power or mechanical power.” The company were authorised to erect a generating station on land scheduled with this provision, “and shall in the construction, erection, and working thereof use all reasonable care to prevent nuisance by vibration.” The Act contained the Model Clause and various protective clauses in favour of the Postmaster-General, the National Telephone Company, various railways, etc. By an Act of 1902 (2 Edw. 7, ch. clxxxii.), proceeding on the recital that “the company are desirous, and it is expedient, that powers should be conferred for the complete adaptation and equipment of the railway of the company for working by electric traction,” sect. 6 authorised this to be carried into effect; and authorised the company to enter into contracts with any other company for the supply of electricity and for the Whitechapel Company, the London, Tilbury and Southend Company, and the Metropolitan District Company to enter into and carry into effect agreements with respect to such supply of electricity. The Act contained clauses for the protection of the Postmaster-General, observatories, etc.

Caledonian  
Railway Act,  
1898.

By the Caledonian Railway Act, 1898 (61 & 62 Vict. ch. clxxxviii.), the company were authorised to work by electrical power the traffic on the Glasgow Central Railway, the Toll Cross Railway, and any railways in connection therewith owned and worked by the company (sect. 19). By sect. 20 power was conferred upon the company to enter into agreements with any company, corporation, body, or persons authorised to supply electricity in any district in which any part of the railways which the company are authorised to work by electrical power are situate for the supply to the company of electricity. The Act contained the usual Model Clause (sect. 21) and a clause for the protection of the Postmaster-General.

Great  
Northern and  
Strand Rail-  
way Acts,  
1899—1902.

By the Great Northern and Strand Railway Act, 1899 (62 & 63 Vict. ch. cciii.), a company was incorporated and authorised to construct an underground railway from the parish of Wood Green, in the county of Middlesex, to the parish of St. Clement Danes, in the administrative county of London. A generating station was authorised on lands shown on the deposited plans; and nothing is said in regard to nuisances in connection with those lands. The Model Clause was inserted. There were also various

clauses for the protection of vestries, landowners, companies, and others, including water, gas, hydraulic power, telephonic and electric companies. The Act also contained the usual power to divide shares and underpin. By an Act of 1902 (2 Edw. 7, ch. ccxxxv.) certain alterations in the works were authorised, and the undertaking and powers of the company were transferred to the Brompton and Piccadilly Circus Railway (sect. 40). See *ante*, p. 408.

By the North-West London Railway Act, 1899 (62 & 63 Vict. ch. cclxi.), a company was incorporated and empowered to construct underground railways from Marble Arch to Cricklewood, the motive power being "electric power." A generating station was authorised on land described on the deposited plans. No provision regarding nuisance in connection with such land. The Act contained the Model Clause, and also clauses for the protection of the Postmaster-General and water, gas, hydraulic power, telephonic and electric companies. See further the company's Act of 1902 (2 Edw. 7, ch. cclviii.).

North-West  
London Rail-  
way Acts,  
1899—1902.

By the Wirral Railway Act, 1900 (63 & 64 Vict. ch. xci.), s. 4, power was given to work the railways of the company by electrical or other motive power in addition to or in substitution for steam power. The company obtained power to erect a generating station on land described in the schedule. No provision regarding nuisance in connection with such land. The Act contained the Model Clause and a clause for the protection of the Postmaster-General. Section 41 of the Act is as follows :—

Wirral Rail-  
way Act,  
1900.

The Board of Trade shall make Regulations (in this Act referred to as "the Board of Trade Regulations") for securing to the public all reasonable protection against danger arising from the use under this Act of electrical power on the railways referred to in this Act and for regulating the use of electrical power.

Use of elec-  
tricity in  
Liverpool,  
Birkenhead,  
and Wallasey.

Provided that such Regulations shall before being made by the Board of Trade be submitted in respect of electrical power to be used in the boroughs of Liverpool and Birkenhead to the respective corporations of those boroughs respectively and in respect of electricity to be used in the district of Wallasey to the urban council of that district and the said corporations and council shall be afforded an opportunity of being heard thereon.

By the Mersey Railway Act, 1900 (63 & 64 Vict. ch. cxxxiv.), s. 5, the company were authorised to work by electrical power the traffic on their existing and authorised railways and on certain other

Mersey Rail-  
way Act,  
1900.

railways. A generating station was authorised on land described in the Act. The Act contained the usual Model Clause and a clause for the protection of the Postmaster-General, but no special provision relating to nuisance.

South-  
Eastern and  
London,  
Chatham and  
Dover Rail-  
way Com-  
panies Acts,  
1900—1902.

By the South-Eastern and London, Chatham and Dover Companies Act, 1900 (63 & 64 Vict. ch. cclvi.), the managing committee were authorised to work by electrical power certain railways between New Romney and Hythe. The Act authorised a generating station on land described (sect. 39). There is no special provision relating to nuisance. The Act contained the Model Clause, and a clause for the protection of the Postmaster-General. See also the Act of those companies of 1902 (2 Edw. 7, ch. ccliv.).

Bray and  
Enniskerry  
Railway Act,  
1900.

By the Bray and Enniskerry Railway Act, 1900 (63 & 64 Vict. ch. cclx.), s. 4, the company were authorised to work the traffic by means of steam power or electrical power. A generating station was authorised on land shown on deposited plan. Nothing is said as to nuisance. The Act contained the Model Clause, and a clause for the protection of the Postmaster-General.

South-  
Western and  
Isle of Wight  
Junction  
Railway Act,  
1901.

By the South-Western and Isle of Wight Junction Railway Act, 1901 (1 Edw. 7, ch. xcix.), a company was incorporated for the purpose of constructing the railways and tunnel for effecting the contemplated junction (sect. 4). By sect. 35 it was enacted that the company might work by electrical power the traffic on the railway, and, with certain consents, certain portions of other railways. By sect. 36 power was conferred to maintain electric mains, lines, cables, bonds, wires, and pipes for transmitting electrical energy. By sect. 39 the company were authorised to construct a generating station on land described in the schedule to the Act. There is no special provision as regards nuisance. The Act contained the usual Model Clause and a clause for the protection of the Postmaster-General.

Cork, Black-  
rock and  
Passage Rail-  
way Act,  
1901.

By the Cork, Blackrock and Passage Railway Act, 1901 (1 Edw. 7, ch. ccxl.), s. 23, it was provided that subject to regulations to be prescribed by the Board of Trade, the company might work the traffic on their existing or authorised railways or any part thereof wholly or partly by electrical power, and by sect. 25 the company were authorised to enter into agreements with any company, corporation, body, or person authorised to sell electricity in any district in which any part of the railways of the

company are situated for the supply to the company of electricity or electrical energy. The Act contained the Model Clause.

By the Portmadoc, Beddgelert and South Snowdon Railway Act, 1901 (1 Edw. 7, ch. cclxii.), the railway company were authorised to supply electrical energy within a defined area of supply. By sect. 64 it was enacted that subject to regulations to be prescribed by the Board of Trade, the company might work their railway by electricity. Generating and transforming stations, etc., on land defined in the Act were authorised. No special provision as to nuisance. The Act contained the Model Clause.

Portmadoc,  
Beddgelert  
and South  
Snowdon  
Railway Act,  
1901.

By the Manchester and Liverpool Electric Express Railway Act, 1901 (1 Edw. 7, ch. cclxv.), a company was incorporated for the purpose of constructing between the places named a "railway in accordance with the system known as the Monorail system." Section 72 authorised the company to work the traffic by electrical power. The company were authorised to appropriate and use for generating station, lands described in the second schedule. The Act contained the Model Clause, and the clause for the protection of the Postmaster-General. It also contained numerous protective clauses. There is no special provision regarding nuisance. Section 73 of the Act provided as follows:—

Manchester  
and Liverpool  
Electric  
Express Rail-  
way Act, 1901.

For further securing to the public and to passengers on the railway and to the servants of the Company all reasonable protection against danger arising from the use of the railway under the provisions of this Act the following provisions shall have effect (that is to say):—

Special provisions for protection of passengers and the public.

- (1) The Company shall submit for the approval of the Board of Trade plans sections and other details of their proposals with respect to—
  - (a) The construction and materials of the permanent way and proposed mode of maintenance thereof;
  - (b) Rolling stock;
  - (c) Mode of working including system of signalling;
  - (d) Electric installation;
  - (e) System of braking; and
  - (f) Mode of fencing and prevention of trespass;

And the railway shall be constructed only in accordance with the plans sections and other details as approved by the Board of Trade;

- (2) The Board of Trade may require the Company at any time before and during the construction of the railway to conduct at their own expense such experiments as that Board may desire to have made with a view to determining whether the proposals of the

Manchester  
and Liverpool  
Express Rail-  
way—*contd.*

Company in respect of any matters referred to in this section are satisfactory and the Company shall comply with any such requirements before opening the railway for the public conveyance of passengers :

- (8) The Board of Trade may make regulations for giving effect to all or any of the foregoing provisions of this section and also for securing to the public and to passengers and to the servants of the Company all reasonable protection against danger arising from the use under this Act of electrical power on the railway and for regulating the use of electrical power :
- (4) The Company or any other company or person using any electrical power on the railway contrary to the provisions of this Act or of any regulations made by the Board of Trade under this section shall for every such offence be liable to a penalty not exceeding ten pounds and also in the case of a continuing offence to a further penalty not exceeding five pounds for every day during which such offence is continued after conviction thereof :
- (5) The provisions of this section shall be in addition to and not in substitution for any provisions for the protection of the public and of passengers and of the servants of the Company contained in any general Act relating to railways which are applicable to the railway and the Company.

Liverpool  
Overhead  
Railways.

By the Mersey Docks and Harbour Board (Overhead Railways) Act, 1878 (41 & 42 Vict. ch. cxviii.), certain overhead railways were authorised ; but by the Mersey Docks and Harbour Board Overhead Railways Act, 1882 (45 & 46 Vict. ch. ccxiv.), the above Act of 1878 was repealed, and new and further powers given for the construction of overhead or high-level railways in connection with the docks on the Liverpool side of the River Mersey. By an Act of 1887 (50 & 51 Vict. ch. cxxxix.) an extension of time was granted and power given to demise or lease the railways authorised to any company incorporated by special Act of Parliament. By a further Act of 1889 (52 & 53 Vict. ch. cxl.) certain parts of the railways were authorised to be abandoned, and a new railway was substituted. By the Mersey Overhead Railway Company Act, 1888 (51 & 52 Vict. ch. cx.), the Liverpool Overhead Railway Company was incorporated with power to carry out the powers given by the aforesaid Acts. By the Liverpool Overhead Railway Act, 1892 (55 & 56 Vict. ch. cxii.), the Liverpool Overhead Railway Company obtained an extension of time, and were authorised to construct certain extensions of the railways. By sect. 37 power was conferred upon the company to work the railways by " steam, electricity, or other motive power." The section goes on to provide, " but

in case any works for the production of electricity be erected by the company on any land to the eastward of the railways authorised by any existing Acts or by this Act, the company shall not be exonerated from any indictment, action or other proceeding for nuisance in the event of any nuisance being caused by any stationary engines used or employed by the company in the production of electricity in or upon any such land." This Act contained clauses for the protection of the Postmaster-General and the National Telephone Company. By the Liverpool Overhead Railway Act, 1899 (62 & 63 Vict. ch. clv.), it was recited that the Liverpool Overhead Railway Company had constructed and were working by electric traction an overhead railway from Seaforth Sands Station, within the urban district of Waterloo-with-Seaforth, to Dingle Station, within the city of Liverpool. This Act authorised the company to construct certain tramways and also to lease and work other tramways previously authorised. By sect. 25 electricity was authorised as the motive power subject to Board of Trade Regulations. A generating station on land described was authorised (sect. 27), and no special provision is made regarding nuisance. The Model Clause was inserted, as also a clause for the protection of the Postmaster-General, and the usual clause authorising the Board of Trade to make byelaws in connection with the working of the tramways.

Liverpool  
Overhead  
Railways—  
*contd.*

Besides the Acts of the Session of 1902 included in the foregoing, the following Acts authorise the working of railways by electricity:—Edgware and Hampstead Railway (2 Edw. 7, ch. cclvii.); Donegal Railway Act, 1902 (2 Edw. 7, ch. xxix.), ss. 17, 18, 20; London, Tilbury and Southend Railway Act (2 Edw. 7, ch. clxxxi.), ss. 27—8; 43—7 (see *ante*, p. 412); North and South Shields Electric Railway (2 Edw. 7, ch. clxxviii.)—to connect the two towns by a tube railway under the river Tyne.

Other  
instances  
in Session  
1902.

## (2.) POWERS USUALLY CONFERRED BY TUBE RAILWAY ACTS.

Easements  
and public  
streets.

In 1892, several electric and cable railway schemes having been promoted, a Joint Select Committee of the House of Lords and House of Commons (Right Hon. JAMES STANSFELD, CHAIRMAN) was appointed to consider the best method of dealing with these electric and cable railway schemes within the limits of the Metropolis, and to report.

One of the matters referred to the Joint Committee for inquiry and report was "as to the terms and conditions under which the subsoil should be appropriated." Upon this point the Committee reported (Parliamentary Paper No. 215 of 1892) as follows:—

14. "As to the terms and conditions under which the subsoil should be appropriated, the Committee report that in the case of private property not under the public streets, it appears to them to be desirable that the companies should be allowed to acquire a way-leave instead of purchasing the freehold of the land subject to the terms of the Lands Clauses Acts as to compensation.
15. "In the case of public streets the Committee think it expedient that the companies should be empowered to pass under the streets at sufficient depth without payment of compensation for the way-leave. In consideration of such free passage the Committee advise that the companies should be put under obligation to furnish an adequate number of cheap and convenient trains" (s).

It may be added here in regard to this question of "terms and conditions," that in 1901 another Joint Select Committee of the House of Lords and House of Commons was appointed on the subject of London underground railways (Lord WINDSOR, CHAIRMAN) (s). In their Report (Parliamentary Paper 1901, No. 279) the Committee say: "We concur in the recommendations of the Joint Parliamentary Committee of 1892 as to the acquisition of way-leaves in the case of private property, and in the case of passing under the streets."

Lands.  
Taking of  
lands and  
interest  
therein.

The first Act authorising the Central London Railway Company was passed in the Session of 1891 (54 & 55 Vict. ch. cxcvi.) (see *ante*, p. 405). As regards land and interests therein the following provisions may be noted. By sect. 5 power is given to take certain described and delineated lands, and there

---

(s) The Joint Committees of 1892 and 1901 are more fully referred to *post*, pp. 426, 427.



is an enactment against taking the surface of any public street or road (unless authorised to be stopped up), and then follows this proviso :—

Lands, etc.—  
*contd.*

“ But (subject as aforesaid) the Company may enter upon take and use the subsoil and under surface of any public street road or footway shown on the deposited plans and described in the deposited book of reference or so much thereof as shall be necessary for the purposes aforesaid.”

Following the Report of the Joint Committee of 1892, the above proviso has now become a common form to be met with in Acts authorising Tube Railways.

Speaking generally there will be found in all the more recent Acts enactments which may be summarised as follows :—

- (1.) Power to take portions of certain houses, buildings or manufactories where such portions may be severed from the remainder of the said properties “ without material detriment thereto ” and notwithstanding sect. 92 of the Lands Clauses Consolidation Act, 1845.
- (2.) Power to acquire easements only under certain scheduled lands and to “ appropriate and use the subsoil and under surface of any such lands ” (†), and to purchase vaults, cellars, or arches under the surface, such purchase not to be deemed a purchase within the meaning of sect. 92 of the Act of 1845. The following proviso (see paragraph No. 14 of the Joint Committee of 1892, Parliamentary Paper 215 of 1892) is sometimes added here :—

“ But nothing in this section contained nor any dealing with the lands in pursuance of this section shall relieve the company from the liability to compensation under the 68th section of the Lands Clauses Consolidation Act, 1845, and every case of compensation to be ascertained under this Act shall be ascertained according to the provisions contained in the Lands Clauses Act.”

---

(†) The Waterloo and City Railway Company's Act, 1893 (56 & 57 Vict. ch. clxxxvii.), incorporating the Lands Clauses Consolidation Act, 1845, authorised the company to construct an underground railway, and provided that, with respect to certain lands belonging to the plaintiff, the company should not be required wholly to take them, but might “ appropriate and use the subsoil and under-surface,” subject, however, to the liability to make compensation under sect. 68 of the Lands Clauses Act. The company commenced boring through the subsoil of the plaintiff's land for the purpose of making a tunnel, but without having given him a notice, under sect. 18 of the Lands Clauses Act, to treat for the purchase of the subsoil so used :—*Held*, that the company were taking not merely an easement, but “ land ” ; that “ appropriate ” meant “ appropriate by way of purchase ” ; and that therefore they could not “ appropriate and use ” the subsoil without first complying with the provisions of the Lands Clauses Act as to the purchase of land. *Semble*, the 84th and following sections of the Lands Clauses Act, 1845, as to the deposit of purchase money in case of entry on lands before agreement, apply to the appropriation and user of subsoil under a special Act such as that above-mentioned (*Farmer v. Waterloo and City Railway Co.*, [1895] 1 Ch. 527).

- (8.) Power to underpin and otherwise strengthen houses and buildings within 100 feet of the railway.

Compensation for damage caused by working of the railway.

Before Lord WINDSOR's Committee in the Session of 1902 much discussion (at which Lord Ribblesdale, Chairman of another group of Tube Bills, was present) took place on the question of, whether any and what compensation should be payable in respect of damage caused by the working of the railway. Eventually the following clause was accepted by the Committee, and was inserted in Bills which sought power to authorise Tube Railways for the first time:—

Compensation for damage by working.

- (1) "In addition to the provisions of the Acts incorporated herewith, with respect to compensation for lands taken or injuriously affected, the Company shall make compensation to the owner, lessee, and occupier of any land, house, or building which shall be injuriously affected by reason of the working of the railway where constructed in tunnel (including the working of lifts and any other works in connection with the said railway), notwithstanding that no part of the property of such owner, lessee, or occupier is taken by the Company. Provided that all claims for compensation under this section shall be made within two years from the date of the opening of such railway for public traffic, and shall be settled by a single arbitrator, under and subject to the provisions of the Arbitration Act, 1889, save that where the parties do not concur in the appointment of an arbitrator the Board of Trade shall have the powers of the court or judge under sect. 5 of the said Act.
- (2) "An arbitrator under this section may, with the consent of all parties concerned, hear together any class or group of claims under this section" (u).

General provisions as to mode of construction.  
Double tunnels

Approaches.

Tube Acts contain a clause laying down the conditions to be observed in regard to the mode of construction of the railways. The wording of the clause is not identical in all cases. In the first place it is enacted that, except where otherwise provided, the railways must be constructed in two tunnels, for separate up and down traffic, and shall be approached by means of stairs and hydraulic or other lifts or of inclines. The tunnels must be constructed by means of steel or other sufficient metal shields driven forward or onward by hydraulic or other pressure as the work proceeds, such shields being of sufficient length and strength to protect the whole of the soil for a reasonable distance both in front and behind the working faces.

The tunnels must be lined throughout with iron or other sufficient metal plates sufficiently jointed throughout.

(u) Cf. the clause as inserted in the Great Northern and Strand Railway Act, 1902 (2 Edw. 7, ch. ccxxxv.), s. 24, which was made to extend to the line as originally authorised in 1899.

Every shaft must be constructed as a cylinder of iron sunk from the surface of the earth to the authorised level. After the shaft enters the London clay a different mode of construction may be authorised.

Shafts.

It is generally enacted that station tunnels shall not have an internal diameter exceeding a certain number of feet (in the most recent Acts 80). It is also generally enacted that the tunnels between the stations, except in certain instances, shall not have an internal diameter exceeding a defined limit. In their Report the Joint Committee of 1892 say: "The evidence submitted to the Committee on the question of diameter of the underground tubes containing the railways has been distinctly in favour of a minimum diameter of 11 feet 6 inches." The Central London Railway, authorised by their Acts of 1891 and 1892, was accordingly constructed with this internal diameter. In the inquiry before Lord WINDSOR's Committee in 1902, opinion generally favoured a wider diameter.

Stations.

Diameter of  
tubes.

Sufficient trial borings must be made and kept ahead of the works in all tunnels and shafts, in order to ascertain by frequent examinations the nature of the soil in advance of the working faces.

Trial borings.

Any space between the lining of the tunnels (including stations) and the surrounding soil must be properly filled up with tar, lime, or cement grouting, placed therein under pressure.

Grouting.

Before commencing any of the authorised works at any point where necessary, the company must provide air-compressing machinery sufficient to provide a proper quantity of air at such a pressure as will prevent the advent or inflow of any sand, gravel, water, or soil, and the company shall take such precautions that they may at any time during the progress of the work be able to carry on the tunnelling under compressed air. All such machinery must be kept in full working order until the completion of the works in respect of which it is to be used, and shall be used at the working faces, whenever the use thereof is for any reason reasonably necessary or prudent. Should the nature of the soil extracted by means of the trial borings be such as to show that it would be reasonably necessary or prudent to work at any working face under compressed air, then the company shall immediately stop all further excavating work and the further driving of the tunnel at such working face until the said

Air-com-  
pressing  
machinery.

machinery and apparatus is in position and in full working order, and the work at such working face must be carried on under compressed air until the said trial borings shall show that such precautions may be reasonably and prudently dispensed with.

Pumping  
water.

Except in the case of unforeseen accident or for the purpose of removing rain water or other trifling amounts of water no use must be made of pumping or other modes of removing water from the work. The compressed air must be used so as to restrain the advent or inflow of water into the tunnels.

Motive power.

The motive power used to be provided for by the words "electricity or such other motive power as may be approved of by the Board of Trade," or by "electric power." In the more recent Acts the power of the Board of Trade is more widely insisted on. The clause as contained in the most recent "Model Bills and Clauses" runs :—

"Subject to the provisions of this Act and of any Regulations to be prescribed by the Board of Trade (in this Act referred to as the Board of Trade Regulations) the Company may work the traffic on the railway by electrical power and for that purpose may lay down along the railway and maintain and use mains lines and apparatus for transmitting electrical energy."

Occasionally a tube railway company may be authorised to obtain their electricity from any other company, local authority, body, or person, authorised to supply electricity. It is frequently enacted that the company shall not use or supply electrical power except for the purposes of their undertaking.

Lands for  
generating  
station.

Compulsory power is given to acquire land for stations for generating electrical power, with all necessary or convenient buildings, works, engines, dynamos, plant, machinery, apparatus, and conveniences. The clause on this subject in the most recent "Model Bills and Clauses" is as follows :—

"Subject to the provisions of this Act the Company may appropriate and use as stations for generating electrical energy and for providing and working thereon engines, dynamos, and other electrical plant and works, the lands described in the schedule."

To this is added the following footnote: "The establishment of a generating station elsewhere than on scheduled lands must be subject to liability for nuisance." See further *ante*, pp. 21 and 61—70.

In some instances there will be found in the section authorising

a generating station and engines for production of electricity an enactment to the following effect: "And the Company shall in the construction, erection, and working of any such station and engine use all reasonable care to prevent nuisance by vibration." See, *e.g.*, Baker Street and Waterloo Railway Act, 1898 (56 Vict. ch. iv.), s. 7 (8); Metropolitan District Railway Act, 1897 (60 & 61 Vict. ch. cxxlvii.), s. 69.

Provisions are always inserted for the protection of the Postmaster-General, so as to prevent any interference, whether by induction or otherwise, with the telegraph lines from time to time laid down or used by the Postmaster-General, or with telegraphic communication by means of such lines.

Provisions for the protection of the Postmaster-General.

In all the later Acts authorising original works or additional works the Model Clause entitled "Provisions as to the use of electrical power" is invariably inserted. In Acts passed before that clause was definitely settled no clause on the subject was inserted except clauses for the protection of the Postmaster-General, the National Telephone Company, and in many cases particular companies and persons. See the clause set out *ante*, p. 368.

Electrolytic action.

A clause is always inserted in the later Acts providing for the protection of water, gas, hydraulic power, telephonic and electric companies.

Protection of water, gas, hydraulic power, and electric companies.

Provisions are generally made in the Tube Acts for cheap trains and fares for the working classes.

Trains and cheap fares for labouring classes.

Following the precedent of the Water Works Clauses Act, 1847 (10 & 11 Vict. c. 17), s. 19, a section is now inserted in Tube Acts requiring the undertakers to make and keep corrected and open to inspection and to deposit with the clerks of the peace, etc., a survey and map of their works underground.

Map and plan of underground works of undertakers to be made.

The following clause is now in common use in Tube Bills, and will be found in the "Model Bills and Clauses":—

Power to hold patent rights.

"The Company may acquire and hold patent and other rights and licenses (not being exclusive) in relation to the use of electrical power for the purposes of this Act."

It is the usual, but not invariable, practice for these Acts to contain clauses authorising the company, with the prescribed consent of the shareholders to divide any share in their capital into half-shares, of which one shall be called "preferred half-share" and the other "deferred half-share." The dividends

Power to divide shares.

which would be payable on any divided share, if the same had continued an entire share shall be applied in payment of dividends on the two half-shares in manner following: (1) In payment of dividend after such rate, not exceeding 6 per cent., as shall be determined once for all at a general meeting of the company specially convened for the purpose on the amount for the time being paid up on the preferred half-share and the remainder (if any) in payment of dividend on the deferred half-share. The company may not pay any greater amount of dividend on the two half-shares than would have from time to time been payable on the entire share if the same had not been divided. Dividends on the preferred shares are to be paid out of profits of the year only.

Views of the  
Board of  
Trade.

Before Lord WINDSOR'S Committee in the Session of 1902 Colonel H. A. YORKE, R.E., attended at the request of the Committee, and, in reply to the Chairman, stated the views of the Board of Trade upon various points in connection with Tube Railways. Some of these points related to the avoidance of junctions and tunnels, provision against fire by using only non-combustible material, the shape of the tube, the diameter, the lighting of the tunnels, the shape of the platforms, and other matters. See minutes of proceedings before the Select Committee of the House of Lords on the Charing Cross, Hammersmith, and District Electric Railway (No. 2) Bill, April 16th, 1902, at pages 42 to 49. On the subject of inspection of railways by the Board of Trade before opening for public traffic the following extract from the evidence will be of interest:—

Evidence of  
Col. YORKE,  
R.E., Session  
1902.

- (27) What are the present statutory powers of the Board of Trade with regard to the inspection of railways?—The Board of Trade at present have powers which, although not absolutely an obligation, amount almost to an obligation to inspect a railway before it is opened for traffic; but this duty can only be done during the ten days immediately preceding the date at which the company intend to open the line. The inspection is confined under statute (unless special conditions are inserted in the special Act authorising the line) to the question whether, owing to the incompleteness of the permanent way or the insufficiency of the staff, the opening of the line would be attended with danger to the public using the same. I submit it is open to doubt whether, assuming that the line was in all respects complete, it would be within the power at the present time of an inspecting officer to refuse to pass the line, because, say, for instance, the platforms were built of wood instead of stone. And yet I venture to suggest that it is expected of the Department that it shall have regard to the safety of the public in every respect

and the fact that a line has been passed by the Board of Trade is regarded by the public as a guarantee that the railway is as safe as human ingenuity and foresight can reasonably make it.

Evidence of  
Col. YORKE,  
Session 1902  
—*contd.*

- (28) In the opinion of your Department the present powers that are conferred upon the Board of Trade with regard to electric railways come into operation too late; is not that so?—I think that, having regard to the electrical railways which are constructed and worked under somewhat novel conditions, the powers conferred upon the Board of Trade do come into force at rather too late a stage. The inspection can only take place after the whole of the works are completed and the carriages have been provided and the money (which often runs into millions) has been spent. The inspecting officer is then sometimes, or may be sometimes, in a dilemma. He may see things which are open to criticism, but he can hardly refuse to pass the line and demand the rejection of rolling stock, or the reconstruction of stations, upon which large sums have been already spent, merely because they are constructed of wood or for some other reason of that nature.
- (29) I may ask you here this question: have you ever found any difficulty with the railway companies in regard to this inspection?—I am glad to have the opportunity of testifying to the invariable courtesy of all the railway companies and their readiness and anxiety to ascertain and meet the views of the inspecting officers of the Board of Trade.
- (30) Then, in your opinion, some supervision should be exercised at an earlier stage of the work than at present. Is not that so?—That is so.
- (31) I daresay the Board of Trade are not anxious to increase their responsibilities?—No, I think I may safely say that is the case. The Department has no wish to advocate any actual increase in their responsibilities or powers, but only that their powers should be rendered operative at a rather more convenient stage than at present.
- (32) Will you kindly tell the Committee what is the suggestion that you make on behalf of the Board of Trade with regard to dealing with these matters?—If it is not presumption on my part, I would suggest that a better way of dealing with the various matters which I have raised would be to confer on the Board of Trade power to arrange with the company or companies all the necessary details for safety and convenience, such as these as I have hinted at, before the commencement of the work. I have here a draft clause which the Board of Trade have directed me, with all submission, to put before the Committee.
- (33) The clause is a very short one. Will you kindly read it?—The proposed Board of Trade clause is as follows:—
- “The Company shall submit for the approval of the Board of Trade, plans, sections, and other details of their proposals with respect to (a) permanent way, tunnels, platforms, stairs, lifts, and other communications; (b) rolling stock; (c) lighting; and (d) ventilation; and the railway rolling stock and other works shall be constructed only in accordance with the plans, sections, and other details as approved by the Board of Trade.”

Proposed new  
clause  
empowering  
Board of  
Trade.

The Committee accepted the clause thus proposed, and it was inserted in the Tube Railway Bills which passed during the Session of 1902 (v).

Joint  
Committee,  
Electric and  
Cable  
Railways  
(Metropolis),  
1892.

In the session of 1892 six railway schemes having for their object the construction of railways to be worked by electricity were promoted in Parliament. A joint Committee of Lords and Commons was appointed "to consider the best method of dealing with the electric and cable railway schemes proposed to be sanctioned within the limits of the Metropolis by Bills introduced or to be introduced in the present Session, and to report their opinion as to whether underground railways worked by electricity or cable traction are calculated to afford sufficient accommodation for the present and probable future traffic; as to whether any and which of the schemes propose satisfactory lines of route; as to the terms and conditions under which the sub-soil should be appropriated; and whether any and, if any, what schemes should not be proceeded with during the present Session." The Committee made their Report, dated May 23rd, 1892 (Parliamentary paper, 1892, No. 215). The Committee, in their Report deal separately with the Great Northern and City Railway, the object of which was to "relieve the great and growing local passenger traffic of the Great Northern line and to afford it a new and direct access to the City." They reported that they saw no reason why this scheme should not be considered in ordinary course. This Bill ultimately passed into law in the same Session of Parliament. In regard to the rest of the Bills the Report of the Committee concluded as follows:—"It does not appear to the

---

(r) In the case of the Great Northern and Strand Railway the lines were first authorised in 1899. By their Act of 1902 (2 Edw. 7, ch. ccxxxv.), the company were authorised (amongst other things) to make a deviation. The new Board of Trade clause as inserted in that Act was as follows:—

23. The Company shall from time to time submit for the approval of the Board of Trade plans sections and other details of their proposals with respect to—

- (a.) Permanent way tunnels platforms stairs lifts and other communications;
- (b.) Rolling stock;
- (c.) Lighting; and
- (d.) Ventilation;

and the railways sanctioned by the Act of 1899 and this Act rolling stock and other works shall be constructed re-constructed and maintained only in accordance with plans sections and other details as approved by the Board of Trade.



Committee, with regard to any of these lines, that their construction would prevent that of other lines which the necessities of London may from time to time require, and they see no reason, therefore, for advising the postponement of the consideration, in ordinary course, of any of these Bills."

Joint  
Committee  
of 1892—  
*contd.*

In regard to the specific questions which the Committee were required to consider and report upon, the Committee came to the following conclusions:—

- (12.) "With regard to the question whether underground railways worked by electricity or cable traction are calculated to afford sufficient accommodation for the present and future probable traffic, the Committee report that the evidence submitted to them was conclusively in favour of the sufficiency and the special adaptability of electricity as a motive power for the proposed underground tubular railways, whilst the method of cable traction appears also to be of recognised utility, especially in the case of steep gradient lines.
- (13.) "The proposed routes appear to be fairly satisfactory considered as an instalment of the more complete accommodation necessary to meet the constantly increasing needs of London.
- (14.) "As to the terms and conditions under which the subsoil should be appropriated, the Committee report that in the case of private property, not under the public streets, it appears to them to be desirable that the companies should be allowed to acquire a way-leave, instead of purchasing the freehold of the land, subject to the terms of the Lands Clauses Acts as to compensation.
- (15.) "In the case of public streets the Committee think it expedient that the companies should be empowered to pass under the streets at sufficient depth without payment of compensation for the way-leave. In consideration of such free passage the Committee advise that the companies should be put under obligation to furnish an adequate number of cheap and convenient trains.
- (16.) "The evidence submitted to the Committee on the question of the diameter of the underground tubes containing the railways has been distinctly in favour of a minimum diameter of 11 feet 6 inches."

As to the matters referred to in paragraphs 14 and 15, see further the Report of the Joint Committee of Lords and Commons on London Underground Railways, 1901, *ante*, p. 418.

In the Session of 1901 ten London Bills were promoted in Parliament having for their object the construction of tube railways to be worked by electricity. A Joint Select Committee of the House of Lords and the House of Commons (Lord WINDSOR,

Joint  
Committee,  
London  
Underground  
Railways,  
1901.

CHAIRMAN) was appointed to consider:

- (1) Whether the lines of route for underground railways in and near London proposed by Bills which have been or may be introduced during the present Session are best calculated to

Joint  
Committee,  
London  
Underground  
Railways,  
1901—*contd.*

afford facilities for present and probable future traffic; and, if not, what modification of those lines of route are desirable;

(2) What special provisions (if any) should be made for the protection of the owners, lessees, and occupiers of properties adjacent to underground railways from possible damage and annoyance;

(3) What special terms and conditions (if any) as to construction and working should be imposed upon the promoters;

The Committee made their Report on July 23rd, 1901 (Parliamentary papers, 1901, Nos. [177] and 279).

Lord  
RAYLEIGH'S  
Committee,  
1901.

In the meantime a Committee consisting of Lord RAYLEIGH, F.R.S. (chairman), Sir JOHN WOLFE BARRY, K.C.B., F.R.S., and Professor EWING, F.R.S., had been appointed by the Board of Trade "to consider and report to what extent the working of the traffic on the Central London Railway produces vibration in the adjacent buildings, and what alterations in the conditions of such working or in structure can be devised to remedy the same." At the time of the Report of the Joint Select Committee above referred to, Lord RAYLEIGH'S Committee had not completed their investigations, but the Joint Select Committee were in a position to report from them the following: "The Committee may in the meantime say that, from the information already obtained, they believe that on new tubular railways, under proper conditions, no objectionable amount of vibration need be apprehended, but they abstain from a definite recommendation until the further experiments above alluded to are completed."

The ten Bills above referred to stood over until the Session of 1902. Lord RAYLEIGH'S Committee made their Report in January, 1902 (Parliamentary paper, 1902, Cd. 951; and see the Appendices to the Report, Cd. 975). They found that the vibration complained of arose chiefly from two circumstances, viz.: (1) The large proportion of the weight of the locomotives not borne by springs, and (2) want of rigidity in the rail. In their Report they say:—

"One of the most distinct indications from Mr. Mallock's records was the responsibility of the locomotives, as distinguished from the carriages, for the worst part of the disturbances, and the attention of the Committee was called at an early stage to the excessively large load, unrelieved by springs, carried on each axle of the locomotives. The unsprung-borne load carried on each of the four axles of the locomotives is 8 tons, making 32 tons in all. This construction was adopted in order to obviate the necessity for gearing, and the Committee could not but connect the difficulty with the magnitude

of this unspring-borne load. . . . In view of these results we have no hesitation in recommending the adoption of a type of locomotive or motor in which the load not carried on springs is reduced as far as possible. This may be arrived at by using gearing as in the geared locomotive or motor carriages, or by using a gearless locomotive in which an elastic connection is employed between the driving axle and the motor; but we have had no opportunity of experimenting with a locomotive of this type."

Report  
of Lord  
RAYLEIGH'S  
Committee,  
January,  
1902.

"In the trials which have been carried out the motor cars were found to have an advantage in freedom from vibration over the geared locomotive. So far as the Central London Railway is concerned, we are confident that by adopting motor cars in place of the original locomotives the vibration produced by the running of trains can be reduced so as to cause no serious annoyance, although it is possible that the sound of the trains may still be detected, especially in the night. We are able to speak positively as to the motor cars, but we have little doubt that any method of driving in which the unspring-borne load on each axle is reduced to a similarly small quantity might also be used with impunity."

"On the question of the best form of rail and sleeper we have no decisive evidence. We are disposed to prefer a stiffer rail than that in use on the Central London Railway, and we think that in new undertakings sufficient room should be allowed for the introduction of a deeper rail; but we are of opinion that, without altering the permanent way of the Central London Railway, the change of motors which we have recommended will effect a practically complete cure of the disturbances complained of."

On the subject of what are called "Shallow Tunnels" the Joint Select Committee in their Report of 1901 say—

Shallow  
tunnels.

"It has indirectly been brought to the notice of the Committee that another system of underground locomotion, namely, that of subways or shallow tunnels immediately under the surface of the roadways, has been successfully developed and is in process of further extension, both on the Continent and in America."

On this subject see further a Report to the Board of Trade on the Chemin de Fer Métropolitain de Paris, with remarks on shallow tunnels by Lieut.-Colonel H. A. YORKE, R.E., Chief Inspecting Officer of Railways, Board of Trade (Parliamentary paper, 1902, Cd. 977).

A joint report to the London County Council was made by their tramways manager and the electrical engineer on the construction and working of the Boston, U.S.A., Subway, and on the Rapid Transit Subway now under construction in New York, with an addendum by Mr. J. ALLEN BAKER, Vice-Chairman of the Highways Committee, dated October 30th, 1901 (L.C.C. publication, No. 555).

Shallow  
subway.

The London County Council in the Session of 1902 obtained an Act authorising the construction of a shallow subway, from Southampton Row under the new street now being made, under the Strand Improvement Act, 1899, to the Thames Embankment, and to run an electric tramway in the subway to carry the traffic from the terminus at Theobald's Road to the Victoria Embankment at the foot of Savoy Street.

### (8.) REGULATIONS MADE BY THE BOARD OF TRADE.

The Board of Trade have in most cases power to make Regulations under the clause authorising the motive power. Further, under the Model Clause relating to electrolytic action they have power to make Regulations for regulating the employment of insulated returns or of uninsulated metallic returns; for preventing fusion or injurious electrolytic action of or on gas or water pipes or other metallic pipes, structures or substances, etc. See the terms of the Model Clause, *ante*, p. 868. Up to the present time the Board of Trade have not issued any special form of Regulations under the first of the above powers. Under the second they have issued the following form, which will be adapted to meet the requirements of each particular case :—

#### REGULATIONS

PREScribed BY THE BOARD OF TRADE UNDER THE PROVISIONS OF SECTION                      OF THE RAILWAY ACT, 190 , FOR REGULATING THE EMPLOYMENT OF INSULATED RETURNS, OR OF UNINSULATED METALLIC RETURNS OF LOW RESISTANCE; FOR PREVENTING FUSION OR INJURIOUS ELECTROLYTIC ACTION OF OR ON GAS OR WATER PIPES OR OTHER METALLIC PIPES, STRUCTURES, OR SUBSTANCES; AND FOR MINIMISING AS FAR AS IS REASONABLY PRACTICABLE INJURIOUS INTERFERENCE WITH THE ELECTRIC WIRES, LINES, AND APPARATUS OF PARTIES OTHER THAN THE COMPANY, AND THE CURRENTS THEREIN, WHETHER SUCH LINES DO OR DO NOT USE THE EARTH AS A RETURN.

#### *Definitions.*

In the following Regulations—

The expression "energy" means electrical energy.

The expression "generator" means the dynamo or dynamos or other electrical apparatus used for the generation of energy.

The expression "motor" means any electric motor carried on a train and used for the conversion of energy.

The expression "pipe" means any gas or water pipe or other metallic pipe, structure, or substance.

The expression "the Company" has the same meaning or meanings as in the Railway Act, 190 .

Board of  
Trade  
Regulations.

#### *Regulations.*

1. Any machine used as a generator shall be of such pattern and construction as to be capable of producing a continuous current without appreciable pulsation.
2. One of the two conductors used for transmitting energy from the generator to the motors shall be in every case insulated from earth by means of insulators of a strong and durable material so shaped as to offer great resistance to surface leakage, and is herein-after referred to as the "line"; the other may be similarly insulated throughout, or may be uninsulated in such parts and to such extent as is provided in the following Regulations, and is herein-after referred to as the "return."
3. Where any rails on which trains run or any conductors laid within the metal-lined tunnels in which the railway is constructed form any part of a return, such part may be uninsulated. All other returns or parts of a return shall be insulated.
4. When any uninsulated conductor forms any part of a return, it shall be electrically connected to the rails at distances apart not exceeding 100 feet by means of copper strips having a sectional area of at least one-sixteenth of a square inch, or by other means of equal conductivity.
5. When any part of a return is uninsulated it shall be connected with the negative terminal of the generator, and in such case the negative terminal of the generator shall also be directly connected to the iron or other metal plates forming the lining of the tunnels unless this lining is otherwise connected to the rails. In each case the connection shall be made through a suitable current indicator.
6. The iron or other metal plates forming the lining of the tunnels shall be so made and connected together as to form a continuous metal tube.
7. Where any pipe is brought into the tunnel from outside, except any pipe belonging to the Company which is not in metallic connection with or laid within six feet of any other pipe, means shall be provided to secure that no portion of the pipe outside the metal tube shall be in metallic connection with the tube or with any conductor of electricity within the tube.
8. When the rails form any part of the return they shall either be electrically connected, at intervals not exceeding 100 yards, to the metal tube by metallic conductors which will not be appreciably heated by a current of 100 amperes, or they shall not be in any

NOTE.—These Regulations only apply to railways constructed underground in metal-lined tunnels.

Board of  
Trade #.  
Regulations—  
*contd.*

metallic connection with the metal tube except by means of the connections to the negative terminal of the generator. In the latter case the rails shall be supported by sleepers of wood, and they shall be of such sectional area and so connected at joints and from one line of rails to another, and where necessary to supplementary conductors or feeders, that the difference of potential between the rails and the metal tube shall not in any part and under any working conditions exceed 10 volts. A test shall be made at least once in each month.

9. When the return is partly or entirely uninsulated a daily record shall be kept by the Company of the difference of potential during the working of the railway between any two points of the uninsulated return at the time when the load is greatest. If at any time such difference of potential exceeds the limit of seven volts, the Company shall take immediate steps to reduce it below that limit.
10. Every line and every insulated return shall be constructed in sections, and means shall be provided at or near each station for breaking the connection between sections.
11. The leakage current shall be tested daily before and after the hours of running with the working pressure and duly recorded. Should the amount of this at any time appear to indicate a fault of insulation, steps shall at once be taken to localise and remove it.
12. The Company shall, so far as may be applicable to their system of working, keep records as specified below. These records shall be preserved for a period of twelve months, and shall, if and when required, be forwarded for the information of the Board of Trade.

#### *Daily Records.*

No. of trains running.  
Maximum working current.  
Maximum working pressure.  
Maximum current from the rails to generator.  
Maximum current from the metal tube to generator.  
Leakage current (*vide* Regulation 12).  
Fall of potential in return (*vide* Regulation 9).

#### *Monthly Records.*

Maximum difference of potential between rails and metal tube (*vide* Regulation 8).  
Insulation resistance of conductors laid outside metal tube (*vide* Regulation 11).

#### *Occasional Records.*

Localisation and removal of leakage, stating time occupied.  
Particulars of any abnormal occurrence affecting the electric working of the railway.

Signed by order of the Board of Trade this                      day of                      , 190 .

Assistant Secretary,  
Board of Trade.

## IV. POWER ACTS.

IN the Session of 1900 various Bills were promoted to authorise the production and distribution of electricity within defined areas of supply, the main purpose being the supply of electricity as power. The first group of these Bills came before a Committee of the House of Commons, presided over by Sir JAMES KITSON, and consisted of the following Bills :—

Bills in  
Session of  
1900.

County of Durham Electric Power Supply.  
Tyneside Electric Power.  
Lancashire Electric Power.  
South Wales Electrical Power Distribution.

These Bills were all opposed by local authorities, many of whom were authorised distributors of electrical energy used mainly for lighting purposes.

After much evidence had been given the following announcement was made :—

“The CHAIRMAN said he wished to state for the Committee that the value of electrical energy as a means of power had been amply demonstrated, and its importance to industries in this country was admitted. The Committee felt that it was to the public advantage to facilitate measures which would ensure a general supply of electrical power to all consumers who might seek to avail themselves of the economy and efficiency offered in the service of these sources of the application of the power. The Committee therefore did not require the constant repetition of scientific evidence to prove that which had already been proved to their satisfaction.”  
(*Electrician*, May 25th, 1900, p. 187.)

In the result the preambles of the Durham, Lancashire, and South Wales Bills were found to be proved. The preamble of a fourth Bill (North Metropolitan) was found proved in the same Session by a Committee of the House of Commons presided over by Mr. (now Sir ALEXANDER) HARGREAVES BROWN.

Acts passed  
in 1900.

It may be convenient here to insert the following list of all  
E.L. F F

List of all  
Power Acts  
passed to end  
of 1902.

the Power Acts which have been sanctioned up to the present time, as in what follows they will be frequently referred to :—

Session 1900.

COUNTY OF DURHAM ELECTRIC POWER SUPPLY ACT, 1900  
(68 & 64 Vict. ch. ccxxxi.).

LANCASHIRE ELECTRIC POWER ACT, 1900 (68 & 64 Vict.  
ch. ccxxxv.).

NORTH METROPOLITAN ELECTRIC POWER SUPPLY ACT, 1900  
(68 & 64 Vict. ch. cclxxvi.), amended, 1902 (2 Edw. 7,  
ch. clvi.).

SOUTH WALES ELECTRICAL POWER DISTRIBUTION COMPANY  
ACT, 1900 (68 & 64 Vict. ch. cclxxxii.), amended, 1902  
(2 Edw. 7, ch. cxviii.).

Session 1901.

CLEVELAND AND DURHAM COUNTY ELECTRIC POWER ACT, 1901  
(1 Edw. 7, ch. civ.).

YORKSHIRE ELECTRIC POWER ACT, 1901 (1 Edw. 7, ch. cxvi.).

DERBYSHIRE AND NOTTINGHAMSHIRE ELECTRIC POWER ACT,  
1901 (1 Edw. 7, ch. cxxi.), amended, 1902 (2 Edw. 7,  
ch. xvii.).

SHANNON WATER AND ELECTRIC POWER ACT, 1901 (1 Edw. 7,  
ch. cxxxvi.).

CLYDE VALLEY ELECTRICAL POWER ACT, 1901 (1 Edw. 7,  
ch. ccxxv.).

LOCH LEVEN WATER POWER ACT, 1901 (1 Edw. 7, ch. cclxx.) (a).

Session 1902 (b).

CORNWALL ELECTRIC POWER ACT, 1902 (2 Edw. 7, ch. xxxiv.).

GLOUCESTERSHIRE ELECTRIC POWER ACT, 1902 (2 Edw. 7,  
ch. lv.).

KENT ELECTRIC POWER ACT, 1902 (2 Edw. 7, ch. cxxvii.).

---

(a) This Power Act differs so widely from the other Acts that it will be necessary to deal with it separately. See *post*, p. 447.

(b) The following Acts of Session 1902 were amending Acts :—

Derbyshire and Nottinghamshire Electric Power Act, 1902 (2 Edw. 7, ch. xvii.).

North Metropolitan Electric Power Supply Act, 1902 (2 Edw. 7, ch. clvi.).

South Wales Electrical Power Distribution Company Act, 1902 (2 Edw. 7,  
ch. cxviii.).



LEICESTERSHIRE AND WARWICKSHIRE ELECTRIC POWER ACT,  
1902 (2 Edw. 7, ch. cxxxi.).

NEWCASTLE-UPON-TYNE ELECTRIC SUPPLY COMPANY'S ACT, 1902  
(2 Edw. 7, ch. xxi.).

It is necessary now to return to the proceedings before Sir JAMES KITSON'S Committee. Having found the preamble of three of the Bills proved, the Committee communicated to the parties the following declaration—not applicable to the case of the Lancashire Bill—in regard to the lines on which clauses were to be settled :—

Decision of  
Sir JAMES  
KITSON'S  
Committee—  
Session 1900.

1. "The company to be authorised to supply electrical energy for power purposes anywhere within the area of supply, subject to the consent of the local authority in certain cases as set out below.
2. "The company to have no general lighting powers, *i.e.*, distribution to ordinary consumers within the area, except in pursuance of a provisional order obtained in the ordinary way.
3. "Where a local authority is now authorised to supply electricity within the area their consent is to be required for the supply of electricity by the company, the Board of Trade to be empowered to override the refusal of the local authority to give consent if the authority are not prepared to provide the requisite supply on reasonable terms and within a reasonable time.
4. "Any local authority who hereafter gets statutory powers for supplying electricity within the area to have in ordinary cases the option of taking over the company's supply in its local area on terms to be laid down by the provisional order or Act by which the statutory powers are given.
5. "A company having statutory powers to be in the same position as a local authority now having statutory powers; a company to whom powers are hereafter granted to be placed in the same position as a local authority to whom statutory powers are hereafter granted." (*Electrician*, July 6th, 1900, p. 411.)

The following clause was ultimately adjusted, with the assistance of the draughtsman of the Board of Trade, to carry out the decision of the Committee :—

"The powers of the company for the supply of energy under this Act shall be subject to the following provisions :—

Conditions  
affecting  
supply.

"(1.) Energy shall be supplied under this Act only :—

"(a.) For supply in bulk to authorised distributors; and

"(b.) For providing power to any person;

"(2.) The energy supplied to authorised distributors may be used by them for lighting or other purposes and the energy supplied to any person for power may be used by such person for lighting any premises on any part of which the power is utilised, but

Clause of  
1900 as to  
conditions  
affecting  
supply—  
*contd.*

save as aforesaid, the company shall not supply energy for lighting purposes ;

“(8.) Energy shall not be supplied under this Act by the company in any area being at the passing of this Act the area of supply of any authorised distributors, except with the consent of those distributors, but that consent shall not be unreasonably withheld. If any question arises whether that consent is unreasonably withheld, that question shall be determined by the Board of Trade. The consent shall be deemed to be unreasonably withheld if the authorised distributors are not willing and in a position to give the requisite supply upon reasonable terms and within a reasonable time; and in considering what are reasonable terms and what is a reasonable time the Board of Trade shall, amongst other things, have regard to the terms upon which and the time within which the company are willing and in a position to give the supply :

“(4.) If at any time after the passing of this Act any local authority, company, or person become authorised distributors in any area within the area of supply under this Act, the company shall be subject to any provisions which may be made by the Act or provisional order under which the distributors become authorised as to the taking over of any supply then given by the company for use exclusively within the area of supply of the distributors or otherwise as to the powers of the company to supply within that area, and such provisions may be made in any such provisional order under the Electric Lighting Acts.”

This section is taken from the South Wales Act, 1900 (63 & 64 Vict. ch. cclxxxii.).

It must not be taken that this section will be found in the same terms in each of the Acts. There are many variations of it. The section contemplates a supply in bulk to authorised distributors and also a supply of power to any person ; and it provides that the energy supplied to any person for power may be used by such person for lighting any premises on any part of which the power is utilised, “ but save as aforesaid the company shall not supply energy for lighting purposes.” Of the Acts of Sessions 1900 and 1901, six contain this authority to supply electricity to individuals for power, viz. :—South Wales Act, s. 36 ; Yorkshire Act, s. 48 ; Clyde Act, s. 48 ; Shannon Act, s. 11 ; Cleveland and Durham Act, s. 54 ; Derbyshire and Nottinghamshire Act, s. 52. The County of Durham Act, s. 8, confines the supply to “ authorised undertakers ” ; the North Metropolitan Act also confines the supply to “ authorised undertakers ” ; and in the case of the Lancashire Act it is provided by

sect. 36 that the powers of the Act shall be exercised only for the purpose of supplying energy to some general supply district or to or on behalf of some local authority authorised by licence, order, or special Act to supply energy within the area of supply or to some person so authorised. By sect. 4 of the same Act "general supply district" is defined to mean "any borough, urban or rural district or part of a borough or district in which the company may hereafter be authorised by or under any licence, order, or special Act to afford a general supply of electricity." The Shannon Act, s. 11, does not contain sub-sections. (8) and (4) of the section from the South Wales Act above set out.

Variations of  
that clause.

Of the Power Acts passed in the Session of 1902 all of them, except the Cornwall Act, contemplate a supply of electric energy for power to individuals.

Session of  
1902.

On a comparison of the various Power Acts passed during the last three Sessions of Parliament, it will be found that, although in the main their powers tally, yet in matters of important detail they differ. This is probably owing to the fact that neither by Standing Order nor by any Act of Parliament is the Board of Trade charged with any duty to examine into the various Bills, and to report to Parliament as to their contents. The consequence is that promoters frame their Bills as they think fit, and leave it to local authorities and others objecting to state and make good their specific points of objection.

Want of  
uniformity in  
provisions of  
Power Acts.

In the South Wales Act "authorised distributors" is defined to mean "any local authority, company, body, or person authorised by Act of Parliament or Provisional Order confirmed by Parliament to give a general supply of energy within the area of supply or any part thereof." In the Clyde and Durham Acts this definition is made to include licence. In some of the other Acts the expression used is "authorised undertakers," which is defined in the Derbyshire Act to mean "(1) any authority authorised by any general or special Act to undertake or contract for the lighting of streets, bridges, or public places within the area of supply as defined by this Act; (2) any local authority, company, body, or person authorised by Act of Parliament or Provisional Order confirmed by Parliament to supply energy within the area of supply as defined by this Act." In the County

"Authorised  
distributors."

"Authorised  
undertakers."

of Durham Act the expression "authorised undertakers" includes, *inter alia*, "any lighting authority." The definitions of "authorised distributors" and "authorised undertakers" vary with each Act.

The following section occurs in several of the Power Acts :—

As to application for Provisional Orders for Lighting.

"Nothing contained in this Act shall prevent the company from applying and the company may apply for Provisional Orders under the Electric Lighting Acts, 1882 and 1888."

See South Wales, Cleveland and Durham, Shannon, Clyde Valley, Kent, and Leicestershire and Warwickshire Acts.

Electrolytic action.

The Model Clause with regard to protection of gas, water, and other pipes, etc., from electrolytic action does not occur in Power Acts. The reason probably is that (as in the case of Provisional Orders under the Electric Lighting Acts, 1882 and 1888) protection is afforded by Regulation A. 28 and s. 18 of the Schedule to the Electric Lighting (Clauses) Act, 1899. This section is always incorporated.

Act of 1882.

There is no uniformity in the Power Acts as to the sections of the Electric Lighting Acts which are excluded from incorporation. Each special Power Act therefore requires special examination in this respect. By sect. 2 of the Act of 1882, the provisions of that Act apply to every local authority, company, or person who may by any licence, Provisional Order, or special Act to be thereafter passed be authorised to supply electricity within any area.

Two of the Acts exclude sects. 1—8 (County of Durham Act, 1900, s. 3; North Metropolitan Act, 1900, s. 3). Among the sections thus excluded from incorporation are sect. 2 (application of Act; see *supra*), and sect. 6, which authorises the Board of Trade to make Regulations and local authorities to make byelaws. All the other Acts incorporate these sections.

Three of the Acts exclude sects. 10 and 11 (general powers of undertakers and assignment of powers), (County of Durham, 1900; North Metropolitan, 1900; Clyde Valley, 1901). These substitute other provisions on the subject.

Most of the Acts enact the following section, which relates to railways and tramways :—

"The provisions of sect. 18 of the Electric Lighting Act, 1882, and of sect. 12 of the schedule to the Electric Lighting (Clauses) Act, 1899,

restricting the breaking up of tramways or railways where laid across or along any highway on the level, or the roadway of or approaches to any bridge over any railway within the area of supply shall not apply to the company."

See Lancashire Act, 1900, s. 5 ; Cleveland and Durham Act, 1901, s. 5 ; Yorkshire Act, 1901, s. 5 ; Derbyshire and Nottinghamshire Act, 1901, s. 5, and all of the Acts of 1902.

In regard to Overhead Wires, most of the Acts contain the following section :—

"The consent of the local authority (being a rural district council) to the placing of electric lines above ground under sect. 14 of the Electric Lighting Act, 1882, and paragraph (b) of sect. 10 of the schedule to the Electric Lighting (Clauses) Act, 1899, shall not be unreasonably withheld, and if any question arises whether that consent is unreasonably withheld or not that question shall be decided by the Board of Trade" (c).

Overhead wires.

Section 18, so far as it relates to lamps or burners, is excluded from two of the Acts (County of Durham Act, 1900 ; North Metropolitan Act, 1900).

Section 19 (obligation on undertakers to supply electricity) is excluded from three (County of Durham Act, 1900 ; Lancashire Electric Power Act, 1900 ; North Metropolitan Power Supply Act, 1900). Further, as to obligation to supply, see *post*, p. 443.

Section 29 (power for the Board of Trade to relieve gas undertakers from obligation to supply gas in certain cases) is excluded from incorporation in some of the Power Acts.

Section 30 (which provides for an annual report to Parliament by the Board of Trade) is excluded from incorporation by two of the Power Acts (County of Durham Act, 1900 ; North Metropolitan Power Act, 1900).

Section 34 (which enacts that nothing in that Act shall exempt the undertakers or their undertaking from the provisions of any general Act relating to the supply of electricity which might be passed in that or any future Session of Parliament) is excluded from incorporation by the two Acts last mentioned. See, however, sect. 82 of the Electric Lighting (Clauses) Act, 1899, on the same subject.

As regards the Act of 1888, sects. 2 and 3 relate to purchase, and **Act of 1888.**

---

(c) In the Gloucestershire Act, 1902, the County Council is substituted for the Board of Trade.

the remaining sections are inapplicable to works authorised by Acts of Parliament. Of the fifteen Power Acts passed during the Sessions of 1900, 1901, and 1902, three exclude the Act of 1888 altogether, and the rest exclude sects. 2 and 8 only.

**Act of 1899.** Section 2, sub-s. (2) of the Schedule to the Electric Lighting (Clauses) Act, 1899, incidentally refers to purchase; and s. 3 provides that "The undertakers shall not purchase or acquire the undertaking of or associate themselves with any company or person supplying energy under any licence, Provisional Order, or Special Act, unless the undertakers are authorised by Parliament to do so." A power of revocation in case of contravention is added. All of the Power Acts exclude these provisions from incorporation.

**Area of supply.** Section 4 (area of supply and prohibition of supply beyond area) is incorporated with all the Power Acts except Durham and North Metropolitan, but these Acts contain sections defining the limits of supply.

**Security for execution of works.** Section 5 of the Schedule to the Act of 1899 contains provisions as to giving security for the execution of works in cases where the undertakers are not a local authority. This section is excluded from incorporation with all of the Power Acts, except that of the South Wales Company.

**Audit of accounts.** Section 6 provides for the audit of the undertakers' accounts. This section is incorporated with all of the Power Acts.

**Local authorities.** Sections 7—9 relate exclusively to local authorities, and are excluded from incorporation.

**Nature and mode of supply.** Section 10 relates to the nature and mode of supply, and enacts, *inter alia*—

"The energy shall be supplied only by means of some system approved in writing by the Board of Trade and subject to the Board of Trade Regulations."

This section is incorporated with all of the Acts, although two of them exclude from incorporation sect. 6 of the Act of 1882, which is the section expressly authorising the Board of Trade to make regulations "for securing the safety of the public from personal injury or from fire or otherwise." The two Acts above referred to are County of Durham, 1900, and North Metropolitan, 1900. As to overhead wires, see *ante*, p. 489.

Section 11 (additional provisions as to works) and sect. 12 Works.  
(powers for execution of works) are incorporated by all of the  
Power Acts. Most of them contain the following section :—

“ The provisions of sect. 18 of the Electric Lighting Act, 1882, and of sect. 12 of the schedule to the Electric Lighting (Clauses) Act, 1899, restricting the breaking up of tramways or railways where laid across or along any highway on the level or the roadway of or approaches to any bridge over any railway within the area of supply, shall not apply to the company.”

The following sections 13—(street boxes), 14 (notice of works, Street boxes,  
with plan to be served on Postmaster-General and local authority), etc.  
15 (as to streets not repairable by local authority, railways,  
tramways, and canals), 16 (street authority, etc., may give notice  
of desire to break up streets, etc., on behalf of undertakers), 17  
(as to alteration of pipes, wires, etc., under streets), 18 (laying  
of electric mains, etc., near sewers, etc., or gas or water pipes  
and other electric lines), 19 (for protection of railway and  
canal companies), 20 (for protection of telegraphic and tele-  
phonic wires)—are incorporated with all of the Acts.

Sections 21—29 relate to electric lighting and works in streets necessary for that purpose. They are therefore excluded from incorporation by all of the Acts.

Section 30 relates to penalty for failing to supply energy. Most of the Acts exclude this section “so far as respects supply in bulk”; but in all such cases special provision is made in the Act.

Sections 31—34 relate to the price to be charged for public and private lighting. These are necessarily excluded from incorporation.

Sections 35—37 relate to the appointment of electric inspectors. These are excluded from incorporation, and special enactments taking their place are inserted.

Section 38 (notice of accidents and inquiries by Board of Trade) is incorporated with all the Acts.

Sections 39—48, relating to the subject of testing and the Testing.  
expenses of electric inspectors, are variously dealt with in the Power Acts. All of them incorporate sect. 39. Wherever the other sections are excluded from incorporation, special provisions are made in the various Acts.

**Meters.**

Sections 49—59 relate to meters, and are incorporated by all of the Power Acts, save that sects. 49 and 58 are excluded from incorporation by two of the Acts which substitute special provisions (County of Durham, 1900, and North Metropolitan, 1900). See *ante*, p. 196, *n*.

**Map.**

Section 60 (map of area of supply to be made) is incorporated in all of the Acts save the following four: Durham, North Metropolitan, Yorkshire, and Cornwall, in each of which Acts special provisions are substituted.

**Notices.**

Section 61 (notices, etc., may be printed or written) and sect. 62 (service of notices, etc.) are incorporated with all the Acts.

**Revocation.**

Sections 63—68 relate to revocation of Provisional Orders in certain cases. On the subject of revocation the Schedule to the Act of 1899 contains many special provisions, viz.: Section 3 (2) (purchase of other undertakings); sect. 4 (3) (supplying energy beyond area of supply); sect. 5 (3) (failure within six months to satisfy the Board of Trade that the undertakers are in a position to discharge their duties and obligations or to make required deposit or give security); sect. 23 (3) (failure to lay down distributing mains); sect. 63 (insolvency of undertakers); sect. 64 (where undertaking cannot be carried on with profit); sect. 65 (where local authority are undertakers and works are not executed); sect. 66 (revocation by consent); sect. 69 (3) (failure to comply with any order of Board of Trade in regard to supply by a system not approved by the Board of Trade). Most of the Acts exclude from incorporation in general words the whole of these provisions, except sect. 69, thus: "And any provisions (other than those of sect. 69) with respect to the revocation of the special order." See Lancashire, Cleveland, Yorkshire, Derbyshire and Nottinghamshire, Clyde Valley, and Newcastle-upon-Tyne, Cornwall, Gloucestershire, Kent, and Leicestershire and Warwickshire Acts. Most of the other Acts specifically exclude these sections except 69, and in some cases ss. 4 and 63 also. On the subject of revocation each Power Act will have to be considered by itself.

**Remedying system of supply, etc.**

Section 69 (remedying of system and works) is incorporated with all the Acts. Sect. 70 (publication of regulations), sect. 71 (nature and amount of security), sect. 72 (proceedings of Board of Trade), sect. 73 (approval or consent of Board of Trade), and sect. 74 (notice of approval of Board of Trade, etc., to be



given by advertisement) are incorporated with all of the Power Acts.

Section 75 (notice of application for extension of time, etc., to be given to local authority) is excluded from incorporation in most of the Acts. Extension of time.

Section 76 (recovery and application of penalties) and sect. 77 (undertakers to be responsible for all damages) are incorporated with all the Acts. Recovery and application of penalties.

Section 78 (as to mortgages) is generally excluded from incorporation, special clauses being inserted authorising the creation and issue of debenture stock and incorporating Part III. (debenture stock) of the Companies Clauses Act, 1868. Mortgages.

Section 79 (saving for Postmaster-General) and sect. 80 (saving rights of the Crown in the foreshore) are incorporated with all the Acts. Postmaster-General and rights of Crown.

Section 81 (undertakers not exempted from proceedings for nuisance) is in the following terms :— Nuisance.

(81.) "Nothing in the Special Order shall exonerate the undertakers from any indictment, action, or other proceedings for nuisance in the event of any nuisance being caused or permitted by them."

The provisions of the Power Acts are not uniform in regard to this section. Some of the Power Acts incorporate it and some do not, and some, while incorporating it, add the qualification that it shall not apply to any generating station or works erected on lands described or scheduled. This subject is dealt with fully, *ante*, p. 19, and pp. 61—70.

Section 82 (provision as to general Acts) is incorporated with all the Acts. General Acts.

Those who are authorised to be supplied with electrical energy may compel the undertakers to supply them with energy under the conditions stated in the various Acts, and at a price not exceeding the scheduled prices, and the power company are bound to furnish and lay the service lines. The conditions include (1) a notice to be served on the company specifying the point at which supply is required and the maximum power required and the date (not being an earlier date than a reasonable time); (2) a written contract to take and pay for the supply of energy of such an amount as to pay the undertakers 20 per cent. on their outlay. The Supply of electricity may be compelled.

wording of this section in the various Acts differs—sometimes a period of years is prescribed. In the section authorising a supply of energy to authorised undertakers a proviso is inserted to the following effect:—

“Provided always that the company shall grant to any such distributor as favourable terms and conditions for the supply of electricity as those granted by the company to any other authority, company or person whose circumstances are similar.” The wording of this proviso varies.

**Accounts.**

With regard to accounts, that matter depends upon sect. 9 of the Act of 1882, which requires the undertakers to publish annual accounts, the form of which may be prescribed by the Board of Trade. This section has not been excluded from incorporation in any of the Power Acts. As to audit of the accounts, see sect. 6 of the Schedule to the Act of 1899.

**Lands.**

The Power Acts, speaking generally, incorporate the provisions of the Lands Clauses Acts, with respect to the purchase and taking of lands otherwise than by agreement and the entry on lands by the promoters of the undertaking; and confer power to take land compulsorily for stations for generating, transforming, and transmitting electric energy, with dynamos and other machinery. Many of the Acts further authorise the purchase by agreement of additional land, not exceeding a defined number of acres, with the following qualification, “Nothing in this Act shall exempt the Company from any indictment, action or proceeding for nuisance in the event of any nuisance being caused or permitted by them upon any lands acquired under this section, or authorise the Company to erect any station for generating electricity upon any lands acquired under this Act, other than on the lands referred to in the section of this Act, of which the marginal note is ‘Lands for generating station and other purposes.’”

**Capital.**

Some of the Power Acts authorise the company, with the prescribed consents, and after 60 per cent. has been paid up on the shares, to divide the shares into half-shares, of which one shall be called “preferred half-share,” and the other “deferred half-share.” This device is not peculiar to the Power Acts.

**Dividends on divided shares.**

The dividend (limited, as after-mentioned, to 8 per cent.), which would be payable on any divided share if the same had continued an entire share shall be applied in payment of dividends on the two half-shares in manner following:—First, in payment

of dividend after such rate not exceeding 6 per cent. per annum, as shall be determined once for all at a general meeting of the company, specially convened for the purpose, on the amount for the time being paid up on the preferred half-share; and the remainder, if any, in payment of dividend on the deferred half-share. The company are not to pay any greater amount of dividend on the two half-shares than would have been payable on the entire share if the same had not been divided. The dividends on preferred shares are payable only out of profits of the year.

The borrowing powers of the company are limited to a third part of the amount of the capital authorised to be raised. Most of the Power Acts authorise the creation and issue of debentures stock, and incorporate Part III. of the Companies Clauses Act, 1863.

Borrowing  
powers.

The maximum power with which those authorised to be supplied shall be entitled to be supplied is generally put at what may be "reasonably anticipated," and some of the Acts provide for arbitration in case of difference.

Maximum  
power.

The Board of Trade, on the application of the company or of any of those entitled to be supplied with energy, may appoint one or more competent and impartial person or persons to be electrical inspectors under the Act, and the Board of Trade may prescribe the fees to be taken by such inspector and the mode of application thereof. Provision is also made for the testing of mains within districts of local authorities.

Appointment  
of electric  
inspectors.

The maximum price to be charged to consumers is always fixed in a schedule to the Act. These maximum prices vary. In connection with price a sliding scale of dividend is provided for in all of the Power Acts except the Shannon Act. Except as allowed by the sliding scale, the dividend payable by the company on their capital in any year shall not exceed 8 per cent. (*d*), and that is known as the "standard rate of dividend." If in any year the average price per unit obtained by the company is less than  $2\frac{1}{2}d.$  (*e*) per unit (known as the "standard price"), the dividend may be increased in the ratio of  $4s.$  (in some of the Acts  $5s.$ ) per cent. in respect of every  $1\frac{1}{2}$  per cent. by which the

Price.

(*d*) In the Cornwall Electric Power Act, 1902, the maximum dividend is 10 per cent.

(*e*) In some of the Acts  $3d.$

average price charged by the company has been below the standard price. On the other hand, if such average price per unit is more than the standard price the dividend is reduced in the same ratio. The company may in addition to the authorised dividends make good any deficiency in any previous dividends which have fallen below the standard rate of dividend. The provisions with regard to sliding scale and relation of price to dividend are not exactly the same in all the Acts.

Revision of price.

The Board of Trade may, at any time after the expiry of ten years upon the conditions laid down in the particular Act, revise the maximum prices and the relation between price and dividend and the standard prices so fixed. The Board of Trade may, if they think fit, make a similar revision at the expiration of ten years from the last revision. On any such revision, the Board of Trade may modify the provisions of the Power Act both as to price and the relation between price and dividend so far as may be necessary to carry out their decisions on the revision. The wording of the sections on this subject is not uniform.

Agreement as to water supply.

By some of the Power Acts special power is also given to the company and proprietors or trustees of any canal or navigation or other body or person to enter into contracts with respect to supply of water to the company for condensing and other purposes of their undertaking.

Power to lay water pipes.

Power is generally given to the company within the area of supply to lay down, maintain, repair, alter, and use pipes for conveying water, and any materials, matters or things, used by them in or resulting from the process of generating or transforming electricity to or from any authorised generating station, and the provisions of the Waterworks Clauses Act, 1847, with respect to the breaking up of streets for the purposes of laying pipes, shall, so far as applicable, extend and apply to the laying down, repairing, altering, or removing of pipes for such purposes.

Compensation for damage.

Power companies will be subject to the provisions of sect. 17 (incorporated with all the Acts) of the Electric Lighting Act, 1882, which provides for compensation for damage as follows:—

“ In the exercise of the powers in relation to the execution of works given them under this Act, or any license, order, or special Act, the undertakers shall cause as little detriment and inconvenience and do as little damage as may be, and shall make full compensation to

all bodies and persons interested for all damage sustained by them by reason or in consequence of the exercise of such powers, the amount and application of such compensation in case of difference to be determined by arbitration."

See *ante*, p. 115. There is also incorporated with all the Power Acts sect. 77 of the Schedule to the Electric Lighting (Clauses) Act, 1899, which enacts:—

"The undertakers shall be answerable for all accidents, damages, and injuries happening through the act or default of the undertakers or of any person in their employment by reason of or in consequence of any of the undertakers' works, and shall save harmless all authorities, bodies, and persons by whom any street is repairable, and all other authorities, companies, and bodies, collectively and individually, and their officers and servants from all damages and costs in respect of those accidents, damages, and injuries."

See also sect. 6 of the Gasworks Clauses Act, 1847, *ante*, p. 212.

The Loch Leven Water Power Act, 1901 (1 Edw. 7, ch. cclxx.), differs in many respects from the other Power Acts. It is primarily an Act to enable the company to construct, maintain, and work waterworks and water power and electrical generating stations for the supply of electrical energy. It incorporates the Electric Lighting Act, 1882, but not the Act of 1888, and it also incorporates the whole of the Act of 1899, except sects. 4, 5, 7—9, and 84 of the Schedule. The Lands Clauses Acts and certain sections of the Waterworks Clauses Act, 1847, are incorporated. The authorised works include dams, aqueducts, tunnels, etc., described in sect. 10. By sect. 15 the company are authorised to raise the level of certain lochs and to impound and appropriate water.

**Loch Leven  
Water  
Power Act,  
1901.**

The powers of the company are of the most general kind. Section 7 provides:—

"Subject to the provisions of this Act the company may provide water under pressure or otherwise for the purpose of supplying water and motive power, and may supply and use such power by hydraulic pressure or otherwise, for any purposes to which such power is or may be applicable, and may generate, use, and supply electrical energy for any purposes to which such energy is or may be applicable, and may erect, lay down, and maintain any buildings, works, machinery, mains, pipes, and other apparatus which may be necessary or useful for those purposes, and may acquire and work, but not exclusively, any patents relating to the supply of water and motive power, and to the generation, storage, supply, measurement, transformation, and distribution of electrical energy, and may, within the area of supply hereinafter specified, supply

**General purposes of  
company.**

any person with water power, motive power, water or electrical energy at such rates and charges and upon such terms and conditions as may be agreed on between them and the person obtaining such supply, and generally may do all such acts and things as may be necessary or useful for giving such supply or incidental thereto."

Compulsory powers to take lands for generating stations (s. 8), etc., is given.

Power is given to purchase additional land by agreement, not exceeding 300 acres, but the company shall not create or permit a nuisance on any such lands (s. 18).

An area of supply is defined by sect. 42.

No limitation is imposed upon the company as to the class of persons to be supplied within the area of supply. Outside the area of supply the following conditions are imposed by sect. 43 :—

Conditions affecting supply outside area of supply.

"The company may supply electricity by agreement outside the area of supply, but the powers of the company in respect to such supply of electricity shall be subject to the following provisions :—

"(1.) Electricity shall be supplied under this section only—

"(a.) For supply in bulk to authorised distributors ; and

"(b.) For providing power to any person :

"(2.) The electricity supplied to authorised distributors may be used by them for lighting or other purposes, and the electricity supplied to any person for power may be used by such person for lighting any premises on any part of which the power is utilised, but save as aforesaid the company shall not supply electricity for lighting purposes :

"(3.) Nothing contained in this Act shall be deemed to confer upon the company any powers enabling them to break up any streets or roads outside the area of supply."

"Authorised distributor" is by sect. 4 defined to mean "any local authority, company or person authorised by Act of Parliament or Provisional Order confirmed by Parliament to give a general supply of energy within ten miles from any part of the lands described in the First Schedule to this Act."

By sect. 46 the company are authorised to place electric lines above ground with the sanction of the Board of Trade.

By sect. 48 they are authorised to supply water for domestic and manufacturing or trade purposes or for the purposes of water power.

By sect. 54 the company may apply for Provisional Orders under the Electric Lighting Acts, 1882, 1888, 1899.

# INDEX.

---

## A.

### ABOVE-GROUND WORKS,

- provisions of Electric Lighting Act, 1882,
  - undertakers not to place any electric lines above-ground, along, over, or across any street without express consent of local authority, 30, 109.
  - local authority may require undertakers to remove, where placed contrary to s. 14 of Act of 1882...31, 109.
  - local authority may themselves remove and recover expenses, 31, 109.
  - court of summary jurisdiction may order removal notwithstanding consent of local authority, 31, 109, 110.
- action by householder for injunction, 111.
- special provisions in the special Acts of various municipal corporations authorising removal of unauthorised, 111, 112.
- the *Wandsworth Case* relating to overhead wires, 110.
- London Overhead Wires Act, 1891...31, 325.
  - the Act set out, 325.
  - See more fully under* LONDON OVERHEAD WIRES ACT, 1891.
- bye-laws made by London County Council under, 332.
- in London orders consent of County Council and Board of Trade required, 164 n.
- provisions of Electric Lighting (Clauses) Act, 1899...163.
  - undertakers not to place any electric line above-ground except with express consent of Board of Trade and local authority, 163.
  - exception where premises in sole occupation or control of undertakers, 163.
  - of so much of any service line necessarily so placed for the purposes of supply, 163.
- Board of Trade regulations regarding aerial lines, 247, 265.
- aerial lines,
  - definition of, in Board of Trade regulations, 243, 261.
  - maximum interval between supports, 247, 265.
  - construction and erection of supports, 247, 265.
  - attachment of aerial lines, 247, 266.
  - height from ground and distance from building, etc., 247, 266.
  - service lines from, 247, 266.
  - angle of crossing thoroughfares, 248, 266.
  - crossing or in proximity to metallic substance, 248, 266.
  - suspending wires, 248, 266.
  - discharge of pressure in case of fire, 248, 266.
  - maintenance, 248, 266.
  - disused aerial lines to be removed, 248, 267.

**ABOVE-GROUND WORKS**—*continued.*

- high pressure lines above ground or in subways, 249, 268.
- removal of, where placed before obtaining of provisional order, 282.
- overhead wires for traction, recommendation of Lord Cross's committee as to consent of local authority, 58.
- Power Acts provide that consent of rural district council to, shall not be unreasonably withheld, 439.
- powers of Board of Trade, 439.

**ACCIDENTALLY DAMAGING,**

- undertakers' pipes, etc., satisfaction to be made for, 228.

**ACCIDENTS,**

- provisions of Electric Lighting (Clauses) Act, 1899.
  - when default caused by "inevitable accident" or *force majeure* will excuse penalty, 188.
  - what is "inevitable accident" or *force majeure*, 188 n.
  - notice to Board of Trade of accident by explosion or fire, or other accident causing, or likely to have caused, loss of life or personal injury, 192.
  - penalty for default, 192.
  - inquiry by Board of Trade, 192.
  - accidentally breaking or damaging pipe, pillar or lamp of undertakers, 228.
- provisions of Board of Trade regulations.
  - accidents by explosion or fire, etc., to be reported to Board of Trade, 247, 264.
  - penalty for default, 253.
- provisions of Factory and Workshop Act, 1901.
  - notice to district inspector of accident causing death or bodily injury, 54, 192 n.
- provisions of Notice of Accidents Act, 1894,
  - notice to Board of Trade of, and inquiry into accidents in certain employments and industries, 54, 192 n.
- provisions of London Overhead Wires Act, 1891,
  - liability for accidents, 329.

**ACCOUNTS,**

- provisions of Electric Lighting Act, 1882,
  - to be kept by all undertakers and made up to December each year, 18, 100.
  - this date frequently altered by statutory authority, 101 n.
  - copies of to be kept for sale, 100.
  - penalty for default, 100.
  - form of, prescribed by Board of Trade for local authorities, 274.
  - for companies, 282.
  - audit of, in the case of local authorities, 137, 139, 141, 143.
  - companies, 160.
- provisions of Power Acts,
  - s. 9 of Act of 1882 as to accounts generally incorporated, 444.
  - s. 6 of schedule to Act of 1899 as to audit also incorporated, 440.
  - special section in some Acts authorising discounts, 74.



**ACCUMULATORS,**

- and other fittings and works of undertakers not subject to distress, etc., 121.
- of undertakers, power to enter premises to remove, 121.
- electric accumulator works certified to be dangerous or injurious to health under Factory and Workshop Act, 1901...52.
- special regulations issued in regard to, 53.

**ADDRESS,**

- and description of applicants for a provisional order, etc., 237.
- See* NOTICE.

**ADJOINING DISTRICT.** *See under* AREA OF SUPPLY.**ADVERTISEMENT,**

- of application to Board of Trade for licence or order (Act of 1882, s. 3, sub-s. 5, and ss. 4, 6), 10, 11, 289.
- Board of Trade rules requiring public advertisements, 239.

**AERIAL LINES,**

- See also* ABOVE-GROUND WORKS and OVERHEAD WIRES,
- definition of, in Board of Trade regulations, 243, 261.
- maximum interval between supports, 247, 265.
- construction and erection of supports, 247, 265.
- attachment of aerial lines, 247, 266.
- height from ground and distance from buildings, etc., 247, 266.
- service lines from, 247, 266.
- angle of crossing thoroughfares, 248, 266.
- crossing or in proximity to metallic substance, 248, 266.
- suspending wires, 248, 266.
- discharge of pressure in case of fire, 248, 266.
- maintenance, 248, 266.
- disused aerial lines to be removed, 248, 267.

**AGREEMENT,**

- no power given by Electric Lighting Acts, 1882 and 1888, to take land except by, 106.
- See further,* LAND.
- laying electric line under special, 182.
- charges by, 190.
- between Postmaster-General and electric lighting company, as to use of trenches, tubes, pipes, etc., 103.
- See further,* ARBITRATION.

**ALTERATION OF PIPES AND WIRES,**

- undertakers may alter position of pipes and wires under street, etc., which interfere with exercise of their powers, 22, 113, 174—177.
- conditions under which this may be done, 113.
- compensation and arbitration, 114.
- elaborate provisions regarding the exercise of this power in schedule to Act of 1899...174—177.
- notice, plan, arbitration, etc., 174—177.
- penalty on undertakers, 176,

**ALTERATION OF PIPES AND WIRES—continued.**

- provision for cases of emergency, 177.
- alteration of telegraphic and telephonic wires, 180.
  - provision for cases of emergency, 180.
- provisions of Light Railway Orders as to, 114 *n.*
  - electric lines under Lighting Acts, 114 *n.*

**ALTERATION OF PRICE OR METHOD OF CHARGE,**  
 after expiration of every period of seven years, 36, 37, 189.  
 ten years in Power Acts, 446.

**ALTERATION OF STANDARD PRESSURE. See PRESSURE.****ALTERNATING CURRENTS,**

- supply by means of high pressure alternating currents and trans-  
 formers, 22, 75.

**AMPÈRE,**

- standard of electrical current, defined by Order in Council, 51, 292.
- limits of accuracy attainable in use of ampère standard, 293.

**ANGLE,**

- of aerial line crossing thoroughfares, 248, 266.

**APPEAL TO BOARD OF TRADE. See BOARD OF TRADE.****APPLICATION,**

- to Board of Trade for licence or order, 7, 94, 238.
- Board of Trade authorised to make, and when made, rescind, alter,  
 or repeal rules regarding, 94.
  - rules must be laid before Parliament, 95.
  - rules now in force, 235 *et seq.*
- all applications for orders or licences must be made by memorial to Board  
 of Trade. Procedure thereupon, 236 *et seq.*
- dates and periods to be observed, 10.
- to Board of Trade for consent to break up private streets, etc., 239.
- of revenue by local authority, 161.
  - capital moneys, 162.
  - Act of 1882 to Scotland, provision for, 135.
  - to Ireland, 135.
- and recovery of penalties, 207.

**ARBITRATION,**

- list of the various matters required to be determined by, under the  
 Electric Lighting Acts, 39 *et seq.*
- where any matter is to be determined by arbitration, Board of Trade to  
 appoint an engineer or other fit person, 130.
- Board of Trade Arbitrations, etc., Act, 1874...130.
- Board of Trade inquiry, expenses of arbitration, etc., 130.
- in altering position of pipes or wires under streets authorised to be broken  
 up, 114.
- when undertakers' wires interfere with docks, basins, or other works on  
 land adjoining canal, 115.
- to determine compensation for damage done by undertakers, 115.

**ARBITRATION**—*continued*.

- where lamp or burner used which unduly or improperly interferes with supply to other consumers, 116.
- where difficulties arise between undertakers and the Postmaster-General, 123.
- as to value of undertaking on transfer by a company to a local authority, 145, 203.
- in connection with works in streets not repairable by local authority or county council, 170.
  - any railway, tramway, or canal, 170.
  - the last-mentioned works, requisition, etc., 170.
- when altering the position of pipes or wires under streets which interfere with undertakers' powers, 175.
  - digging trench for laying main lines near sewer, drain, watercourse, etc., or gas, water, or electric company's pipes, 178.
- where telegraphic or telephonic lines are injuriously affected by induction or otherwise, 180.
- in regard to requisition served by owners of any such telegraphic, telephonic, etc., wires or lines, 180.
- as to rent to be paid for use of subways in metropolis, 303.
  - guarantee where undertakers served with requisition to lay distributing mains, 184.
  - requisition by undertakers requiring supply to be taken for longer period than three years, 184.
- where difference arises as to any improper use of energy or alleged defect in lines, fittings, or apparatus of consumers, 186.
- as to maximum power which a consumer may require to be supplied, 187.
  - price of supply to public lamps, 190.
  - number of testing stations to be established, distance from main, etc., 193.
  - value of undertaking of a company where order revoked and local authority requires them to sell, 203.
  - expense of removing undertakers' works by local authority where company's order is revoked, 204.

**ARCHES,**

- of railways not to be injured, 179.

**ARC LAMPS,**

- to be guarded, 252, 269.
- height from the ground, 252, 270.
- cut-off switch, 252, 270.
- penalties, 253.

**AREA OF SUPPLY,**

- Act of 1882, s. 6, requires limits to be defined in order or licence, 13, 90, 92, 158.
- rules of the Board of Trade regarding, 239.
- definition of, in Act of 1899...156.
- always defined in schedule to order or licence, 158, 233.
- prohibition of supply beyond, 158.
  - revocation for contravention, 158.

**AREA OF SUPPLY—continued.**

prohibition of supply beyond—*continued.*

orders in favour of local authorities, 158.

effect of this considered, 158.

map of, 199.

report of Lord Cross's committee on the question of compulsory purchase of land for generating stations, etc., within area of supply, 56.

precedents, 19, 61—70.

report of Lord Cross's committee on the question of compulsory acquisition of lands or easements for pipes, mains and other works beyond area of supply, 58.

precedents, 70.

supply in bulk outside area of supply generally prohibited in provisional orders, 158.

by Act, municipal authorities may be empowered to supply in bulk outside, to adjoining local authorities authorised to supply electrical energy, 71, 158 *n.*

companies not so authorised, 71.

an exceptional instance, 71.

instances of tramway and railway companies being authorised to supply in bulk, 71.

municipal authorities may be authorised to supply for traction purposes partly within and partly without borough, 72.

Loch Leven Water Power Act, 1901,

special provisions as to supply outside, 448.

**ARREARS,**

due by consumer, not recoverable from incoming tenant, 229.

security may be required, before giving or after commencing to give supply, 186.

**ASSIGNMENT OF POWERS,**

*See further, TRANSFER.*

of local authority under provisional order not to be made without consent of Board of Trade, 105.

such assignment not now favoured by Board of Trade, 105 *n.*

provisions in London orders regarding purchase by local authority, 35, 147, 304.

of powers of company to local authority under Act of 1888...34, 129, 145, 202.

arbitration to settle price, 145.

**AUDIT,**

of accounts of undertakers being a local authority, 18, 137, 139, 141, 143.  
company, 160.

*See further, SCOTLAND and IRELAND.*

**"AUTHORISED DISTRIBUTORS" and "AUTHORISED UNDERTAKERS,"**

supply of energy to, under Power Acts, 437.

definitions of, 437.

definition of "authorised distributor" in Loch Leven Water Power Act, 1901...448.

B.

**BANK HOLIDAY,**

not to be reckoned in computation of number of days, 201.

**BASINS,**

protection of persons having power to construct, on land near to any canal, and whose access may be interfered with by wires, 114.

*See* CANAL.

**BLACK SMOKE. *See* SMOKE.**

**BOARD OF TRADE,**

authorised to grant licences, 5, 89.

orders, 5, 92.

to dispense with consent of local authority in case of provisional orders, 144.

cases in which they have so dispensed, 144.

to make rules in relation to applications for licences or orders, payments in respect thereof, and publication of notices and advertisements, 94.

rules made by, 235.

to insert certain regulations in licences and orders regarding limits, supply, price, etc., 95, 96.

to make other regulations from time to time regarding safety of the public, and for ensuring a proper and sufficient supply of electrical energy, 95, 96.

regulations made in pursuance of above power, 243.

to make regulations in the case of works existing otherwise than under licence, order or special Act, 147.

regulations made in pursuance of the above power, 261.

to make regulations fixing standard pressure, 255.

power to alter same, 255, 255 n, 258 *et seq.*

power of local authority, 255, 255 n, 258 *et seq.*

Board of Trade, 255, 255 n, 258 *et seq.*

to appoint arbitrator on application of either party, 130.

Arbitrations, etc. Act, 1874...130.

power of, to relieve gas undertakers from obligation to supply gas in certain cases, 27, 132.

annual report by, 132.

to prescribe form of accounts, 100.

no assignment of powers by local authority without consent of, 105.

such assignments not favoured by, 105.

consent of, to breaking up private streets, etc., 108, 239.

forms of accounts prescribed by, for a local authority, 274.

company, 282.

ohm standard, legalised by, 293.

ampère standard, legalised by, 293.

volt standard, legalised by, 293.

electrical standardizing laboratory—rules for examination or testing of electrical instruments, 298.

fees payable for, 299.

definition of "Board of Trade regulations" in Act of 1899...156.

**BOARD OF TRADE**—*continued.*

- security of works, to the satisfaction of, 159.
- to appoint competent and impartial person to audit accounts of companies' undertakings, 160.
- nature, mode and systems of supply to be approved by, 163.
- consent of, to placing line above-ground, 163.
- See ABOVE-GROUND WORKS.
- approval of, in the case of any part of any circuit being connected with earth, 163.
- powers of, in connection with—
  - use of land by local authority, 162.
  - street boxes, etc., 163.
  - execution of works in streets not repairable by local authority, 165.
  - laying of electric lines near sewers, gas or water pipes, etc., 177.
  - distributing mains to be laid, 181.
  - revocation of order in various events, as to which, *see* REVOCATION.
  - requisition by owners or occupiers desiring to be supplied, 183 *et seq.*
- methods of charging for supply, 189.
- maximum prices, 189.
- appointment of electric inspectors, 190—192.
- inquiries into accidents, 192.
- testing of mains, 193.
- establishment of testing stations, 193.
- instruments to be kept at testing stations, 194.
- appeal from electric inspector, 195.
- fees and expenses of electric inspector, 195.
- meters, 196—199.
- certifying of meters, 196.
- correctness of meters, 198.
- map of area of supply, 199.
- purchase by local authority of undertaking of company where order revoked, 202.
- undertaking of local authority where order revoked, 204.
- transfer of powers by local authority, 105.
- remedying of system and works, 205.
- mortgages where the undertakers are a company, 208.
- service of notices on, 200.
- proceedings of, 206.
- approval and consent of, how given, 206.
- notice of approval of, to be given by advertisement, 206.
- tube and other railways authorised to be worked by electric power, 403 *et seq.*
- See further, RAILWAY.
- special clause inserted session 1902, giving to, larger powers, including permanent way, rolling stock, lighting, ventilation, etc., 425, 426 *n.*
- tramways and light railways authorised to be worked by electric power, 374 *et seq.*
- See further, TRAMWAY AND LIGHT RAILWAYS ACT, 1896.
- leakage and electrolysis, action of, in connection with. See under LEAKAGE AND ELECTROLYSIS.

**BOARD OF TRADE REGULATIONS,**

- in regard to limits, price, etc., to be inserted in orders, 95.
- for securing the safety of the public from personal injury, or from fire or otherwise, authorised to be made, and from time to time amended, 14, 95, 96.
- form of regulations now in use, 243.
  - may be amended or repealed from time to time, 96.
  - conference with Board of Trade to settle form of, 14.
- a model form only, which may be altered in detail to suit particular cases, 15.
- to be printed by undertakers and copies kept for sale, 205.
  - penalty for default, 205.
- definition of, in Act of 1899...156.
- amendment of in regard to standard pressure, 15, 258.
  - powers of local authority, 255, 255 *n*, 258 *et seq*.
  - Board of Trade, 255, 255 *n*, 258 *et seq*.

**BOARD OF TRADE RULES,**

- regarding procedure for obtaining licences or orders authorised to be made by Act of 1882...94.
- see the rules set forth, 235.
- may be rescinded, altered, or repealed, 94.
- summary of dates and periods to be observed in application for orders or licences, 10.

**BOARD OF TRADE UNIT,**

- definition of, 52, 234.

**BOROUGH FUNDS ACT, 1872,**

- provisional order not "a local and personal bill" within meaning of, 92.
- local authority seeking order, need not comply with requirements of, 92.
- no application for licence or order can be made by local authority unless resolution at special meeting after one month's notice, 90.

**BORROW,**

- local authority when undertakers may, 12, 98.
- consent of Local Government Board necessary in England, 98 *n*, 139.
  - Secretary for Scotland in Scotland, 98 *n*, 141.
  - Electric Lighting (Scotland) Act, 1902...153.
    - power unlimited, but repayment in 30 years, 153.
  - Irish Local Government Board in Ireland, 98 *n*, 143.
- regulations as to exercise of borrowing powers, 98 *n*.
- form of mortgage, register, and transfer of, 99 *n*.
- accounts must be kept and audited, 18, 100, 137, 139, 141, 143.
- provisions and restrictions as to borrowing and the repayment of loans.
  - See SCHEDULE TO ACT OF 1882, pp. 136 *et seq*.
- undertakers being a company may, on the security of mortgages of the undertaking, 208.
  - on transfer by company, mortgages not to remain a charge, 208.
- power to, under Power Acts, 445.

**BRACKETS,**

- attachment of to buildings—special clause in some Tramway Acts, 390.

**BREAKING UP STREETS,**

- provisions of Gasworks Clauses Act, 1847, relating to, incorporated,  
21, 106, 107, 212 *et seq.*
- power to break up streets under superintendence, 212 *et seq.*
- what is a "street," 212.
- consequences of, without parliamentary authority, 213.
  - indictment, 213.
  - injunction, 213.
  - penalties under Highway Act, 1835...213.
    - Public Health Act, 1875...213.
  - proceedings by owner of *solum* of roads, etc., 215.
- road authority may exercise power of undertakers to break up streets,  
etc., 172.
- how far subsoil of street vested in local authority, 215.
- electric feeders under footway to tramways, 214.
- pole and fuse-box of tramway in footway, 214.
- cases relating to privileges of Postmaster-General and National  
Telephone Co. in connection with the, 217—221.
- saving for rights of owner, etc., of any mines or minerals to work the  
same, 184, 221, 222.
- injury caused to pipes, lines, etc., by steam rollers, 222.
- metropolitan subways, 222.
- undertakers not to enter on private land without consent, 223.
- notice to be served on road authority before breaking up, 224, 225.
- superintendence, etc., 225.
- plan, and what particulars the same must contain, 225.
- reinstatement, 226.
- streets to be fenced and lighted while opened, 226.
- penalty for delay in reinstating, 226.
- in case of delay, road authority may reinstate and recover expenses,  
227.
- liability for negligence of contractor, 219, 220.
- restriction on breaking up of private streets, railways, and tramways,  
108, 239.
  - when Board of Trade may authorise, 108, 239.
- nothing in Board of Trade regulations under Act of 1888, s. 4, shall be  
deemed to authorise, 262.
- special section dealing with street boxes, 165 *et seq.*
- cases in relation to the construction of street boxes, 166 *et seq.*
- special section requiring notice of works with plan to be served on the  
Postmaster-General and local authority, 168.
- provisions as to streets not repairable by local authority,  
170.
  - the like as to railways, tramways, and canals, 170.
- special machinery provided where street authority desire to break up  
streets, etc., on behalf of undertakers, 172.
- the like, where undertakers seek to alter position of pipes or wires which  
interfere with the exercise of their powers, 174.
  - regarding the laying of electric lines near sewers, drains, etc.,  
or gas or water pipes, or other electric lines, 177.
- protection of telegraphic and telephonic wires, 179.
- use of subways in metropolis, 222.



**BREAKING UP STREETS**—*continued.*

between a generating station outside area of supply and boundary thereof—Report of Lord Cross's committee, 58.  
precedents on this subject, 70.

**BUILDING,**

placing of pipes, etc., against, not without consent, 223.  
attachment of brackets to,—special clause in some Tramway Acts, 390.

**BUILDING ACT, LONDON, 1894.** *See* LONDON, COUNTY OF.**BULK, SUPPLY IN,**

report of Lord Cross's committee as to conferring powers on promoters seeking to supply energy to other undertakers, and not directly to consumers, 59 *et seq.*  
supply in bulk outside area of supply. *See* AREA OF SUPPLY.  
generally prohibited in provisional orders, 158.  
by Act, municipal authorities may be empowered to supply in bulk to adjoining local authorities who are authorised to supply electrical energy, 71, 158 *n.*  
companies are not so authorised, 71.  
an exceptional instance, 71.  
instances of tramways and railway companies being authorised to supply in bulk, 71.  
municipal authorities may be authorised to supply for traction purposes partly within and partly without borough, 72.

**BURNER,**

undertakers not entitled to prescribe any special form of, 30, 115.  
proviso as to unduly or improperly interfering with supply of electricity to other consumers, 30, 115, 116.  
arbitration in such case, 115, 116.

**BYE-LAWS,**

Act of 1882 authorises the making of, by local authorities, for safety of the public, subject to confirmation by Board of Trade, 16, 96.  
none such made and confirmed, 96.  
where local authorities are themselves undertakers, 96 *n.*  
instances of local authorities authorised to make bye-laws or wiring regulations, 96 *n.*  
in some instances without sanction of Board of Trade, 96 *n.*  
in later cases always with sanction of Board of Trade, 96 *n.*  
forms published by Institution of Electrical Engineers, 96 *n.*  
under Tramway Acts and Orders, 390.  
by urban authorities under Public Health Acts Amendment Act, 1890, 97 *n.*, 271.

**C.****CANAL,**

where undertakers' works are near and interfere with access to, 38, 114, 170.  
access to docks, basins, or other works, adjoining canal, 38, 114.  
arbitration in such cases, 38, 114.

**CANAL**—*continued*.

- section for protection of canal companies, 170.
- execution by undertakers of works over or under, 170.
  - notice to be given in such case with plan, 170.
  - requisition by canal company, 170.
- works, arches, conveniences, etc., of canal company not to be injured, 179.

**CAPITAL,**

- no clause in provisional orders fixing amount of, 12.
- of companies, regulated by their memorandum, 12.
- required by local authority may be borrowed with consent of Local Government Board, 12, 98.
- statement of, proposed to be expended, etc., to be deposited at Board of Trade on application for a licence or order by a company, 238.
- sum proposed to be expended, to be similarly deposited by a local authority, 238.

**CHARGES.** *See* PRICE, REVISION, and SUPPLY.**CHRISTMAS DAY,**

- when not to be reckoned in computation of number of days, 201.

**CHURCH,**

- lighting of, within "public purposes," 89.

**CIVIL DEBT,**

- rent or price due for energy, or for hire, or fixing of meter, must be recovered not as a penalty, but as a, 37, 107, 229, 230.
- how recovered in a court of summary jurisdiction, 108 *n*.
- recovery as a, of expenses incurred by undertakers in cutting off electricity from premises, 108 *n*, 230 *n*.
- remuneration of auditor of company's accounts, 160.
- expenses incurred by undertakers on alteration by consumer of his maximum power, 187.
- of providing new meters where method of charge altered, 199.
- provision of Act of 1899 as to Scotland, 210.

**CLARK CELL,**

- employment of, in connection with the measurement of electricity, 295—297.

**COIN METERS,**

- clause relating to, introduced, 29.
- general power to supply "any meter" and "any fittings thereto," 198.
- theft from, on whom the loss falls, 30.

**COMMITTEE OF PARLIAMENT.** *See* JOINT COMMITTEES.**COMPANIES (MEMORANDUM OF ASSOCIATION) ACT, 1890,**  
altering memorandum with a view to supplying electric light, 93, 94.**COMPANY,**

- may apply for and obtain licence or provisional order, 6, 89, 92.

**COMPANY**—*continued*.

altering memorandum of association with a view to supplying electric light, 93, 94.

defined in Act of 1882 to mean "any body of persons corporate or unincorporate," 133.

when, may be required to sell and transfer undertaking to local authority, 34, 145.

arbitration to settle price, 145.

transfer to, of undertaking of a local authority, 105.

must keep accounts. *See* ACCOUNTS and AUDIT.

**COMPENSATION,**

section as to, in E. L. Act, 1882...115.

1899...208.

Gasworks Clauses Act, 1847...212.

undertakers to do as little damage as may be, and make, 115, 212.

arbitration in such case, 115.

and fine for injury to telegraphic line of Postmaster-General, 127.

to Postmaster-General and local authority in case of non-compliance with section regarding works in or under public streets, 169.

in case of failure to comply with terms of section regarding exercise of powers in streets not repairable by local authority, etc., 171.

alteration of pipes or wires which interfere with the exercise of powers of undertakers, 176.

connection with laying of lines near sewers or gas or water pipes, etc., 178.

case of injuriously affecting telegraphic or telephonic wires, 180.

for electrolytic action on gas or water pipes, etc.,

model clause for preventing damage being caused, 368.

special clause for compensation where damage caused, 354, 356 *et seq.*

in the case of tube railways, 418 *et seq.*

report of joint committee of 1892...418.

easements only in private property, 418.

under public streets without compensation, 418.

powers generally inserted in Tube Railway Acts, 419 *et seq.*

special clause for compensation for damage caused by working within two years, 420.

in the case of Power Acts, 446.

**COMPETITION,**

Act of 1888 provides that grant of licence or order within any area shall not hinder or restrict granting of another licence or order to others within the same area, 144.

some instances of refusal to grant provisional orders in, 12.

many instances of, in county of London, 306 *et seq.*

Sir A. Binnie's Table of overlapping down to end of session 1897... 308.

later table from "*London Statistics*," 1900—1901...310.

clause inserted in certain provisional orders to prevent payment of deficit out of rates, 73.

**COMPLIANCE,**

- with rules of Board of Trade to be proved, 11, 241.
- last day for proving, February 22nd, 11, 241.
- six days' previous notice of the day and hour must be given, 11, 241.

**COMPULSORY PURCHASE,**

- of land, not authorised by Electric Lighting Acts or licences or orders thereunder, 18, 19, 101, 107.
- undertaking of company, under Act of 1888...34, 129, 145, 202.
- by local authority, of the undertaking of a company whose order has been revoked, 202.
- report of Lord Cross's committee regarding land for generating stations, easements for pipes, mains, etc., 56, 58.
- report of Lord Cross's committee regarding compulsory purchase of undertakings by local authorities, 59.
- report of Lord Cross's committee regarding compulsory acquisition of lands or easements for pipes, mains, or other works within area of supply, 56.
- the like beyond area of supply, 58.
- Tramways Act, 1870, does not allow, 374.
- Light Railways Act, 1896, orders under may allow, 375.

**COMPULSORY SUPPLY,**

- consumer may demand a, 24, 116, 185.
- conditions under which such supply may be obtained, 24, 116, 185.
- See further, CONSUMER and SUPPLY.*

**COMPULSORY WORKS,**

- provided for by provisional order, 23, 181.
- distributing mains for general supply throughout every street specified in Sched. II. of Order, 181, 233.
- further distributing mains in remainder of area of supply, 181.

**CONCLUSIVE EVIDENCE. *See EVIDENCE.*****CONDUCTORS.**

- See the Board of Trade regulations, 243—270.*

**CONFIRMATION**

- of provisional order may be opposed, 7, 93.
- See further, PROVISIONAL ORDER.*

**CONSENT,**

- of local authority required for licence, 6.
  - now required for order also, 93, 144.
  - Board of Trade may dispense with, 144.
  - special report in above case, 144.
- instances where Board of Trade have dispensed with, 74 *et seq.*
- report of Lord Cross's committee on subject of consent of local authority, 60.
  - recommend should be dispensed with in provisional orders for lighting, 60.
  - recommend should be dispensed with in provisional orders for tramways, 373.

**CONSENT**—*continued*.

- Board of Trade rules as to consent of local authorities, 235.
- of Board of Trade to breaking up of private streets, 21 108, 165.
- of Local Government Board, etc., to local authorities borrowing, 98,  
137, 139.
- in Scotland, 141.
- in Ireland, 143.

See DATES AND PERIODS TO BE OBSERVED and ABOVE-GROUND  
WORKS.

**CONSTANT PRESSURE,**

- provided for, in Board of Trade regulations, 254, 255, 259.

**CONSTANT SUPPLY,**

- undertakers to provide,—required by Board of Trade regulations, 26, 254.
- proviso as to discontinuing for purposes of testing, etc., 254.

**CONSUMER,**

- definition of, in Board of Trade regulations under s. 4 of Act of 1888...261.  
Act of 1899...156.
- obligation on undertakers to supply electricity to, 24, 116.
- may be required to enter into a written contract and also give security,  
116 n, 185, 186.
- no undue preference to be shown by undertakers, 24, 117.
- no special form of lamp or burner to be prescribed, 115.
- undertakers not to control or interfere with use of electricity by, 115.
- proviso for protecting other consumers from undue or improper interference  
with supply, 116.
- premises of, regulations affecting lines and works within, 251, 269.
- responsibility of undertakers for their wires within, 251, 269.
- fire risks, 251, 269.
- main fuses or disconnectors, 251, 269.
- insulation and protection of lines and apparatus upon, 251,  
269.
- transformers and high pressure apparatus, 251, 269.
- undertakers not to make connection where leakage would  
result, 251.
- discontinuance of supply where leakage, 251.
- appeal to electric inspector, 252.
- conditions on which consumers may demand a supply, 24, 116, 185.
- contract and security, 185.
- price, 189.
- lines, fittings, and apparatus of, to be in good order and condition, 186.
- maximum power which may be demanded by, 187.
- arbitration in case of difference, 187.
- when supply may be cut off. See CUTTING OFF SUPPLY OF ENERGY.
- power to enter premises of, 121.
- undertakers' fittings in possession of, not liable to distress, etc., 122.
- where meter belongs to, he must keep it in repair, 197.
- undertakers, they keep in repair, 198.
- having separate supply, special section relating to, 72, 73, 184 n.
- in arrear, special clause authorising local authorities to refuse to supply,  
73.

**CONSUMERS' TERMINALS,**

definition of, in Act of 1899...156.

declared pressure at, 255, 259.

variation of pressure at, 256.

pressure at, not to exceed 250 volts at any pair of terminals, except with approval of Board of Trade, 244, 262.

*See further, PRESSURE.*

**CONSUMERS' WIRES,**

definition of, in Board of Trade regulations, 243.

**CONTINUOUS CURRENTS,**

supply of energy by means of, 22, 75.

**CONTRACT,**

general powers of undertakers to, 101, 105.

local authority having obtained licence, order, or special Act may contract for works for supply of electricity, 105.

no contract or assignment to be made transferring undertaking of local authority without consent of Board of Trade, 105.

formalities regarding, with local authorities, 103.

consumer may be required to enter into written, and also to give security, 116 *n*, 185, 186.

cases decided on various special contracts, 117—120.

**CONTRACTORS,**

when undertakers liable for the negligence of, 219.

**COUNTY COUNCIL,**

definition of, in Act of 1899...156.

*See further, LONDON COUNTY COUNCIL.*

**COUNTY OF LONDON. *See* LONDON, COUNTY OF.****COURT OF SUMMARY JURISDICTION. *See* SUMMARY JURISDICTION.****CROSS'S, LORD, COMMITTEE OF 1893,**

joint committee of both Houses on Electric Powers (Protective Clauses), 343.

protective clauses theretofore in use, 344.

complete list of Acts in which inserted, 345, 346.

evidence of the late Sir Courtenay Boyle, K.C.B., 347.

clause suggested by the joint committee, 349.

recommendations of the joint committee, 351.

joint committee of both Houses, 1898, on Electrical Energy (Generating Stations and Supply), 55, 353.

report of, as to connection with earth, 353.

as to protection of telegraphs and telephones, 353.

as to protection of gas and water pipes, 353.

as to difficulty arising from working of tramways by trolley wires, 353.

evidence of Sir Wm. Preece, K.C.B., F.R.S., 353 *n*.

## CROSS'S, LORD, COMMITTEE OF 1898,

joint committee of both Houses on Electrical Energy (Generating Stations and Supply), 55, 353.

questions referred to them for consideration and report, 55.

report of, on the following matters—

“compulsory powers for acquiring sites for generating stations and lands or easements for pipes and mains therefrom and other works”—*i.e.*, where within area of supply, 56.

liability for nuisance, 57.

notices to local authorities, owners, etc., 57.

principle of *Geddis v. Bann Reservoir*, 19, 57, 209.

no public legislation passed, 61.

principle acted on in numerous cases in legislation by Bill, 61—70.

“compulsory powers for the acquisition of land for a generating station and lands or easements for pipes and mains and other works to the area of supply”—*i.e.*, where generating station outside area of supply, 58.

mains to connect outside generating station with area of supply, 58.

instances where above recommendations acted upon in legislation by Bill, 70.

where generating station outside area of supply undertakers should not be allowed (except where Parliament or the Board of Trade decide otherwise) to supply from that generating station any area outside the area of supply, 61.

recommendations of, as to consent of local authorities to erection of overhead wires for traction purposes, 58.

authority should not have absolute veto, 58.

bulk supply over districts of numerous local authorities, 59.

purchase by local authorities, 59.

“local authorities should be empowered to purchase undertakings partly outside their area of supply,” 61.

supply of energy over an area including numerous local authorities and involving plant of exceptional dimensions and high voltage, 59.

purchase by local authority in the above case and generally, 59.

protection of telegraphs and telephones, 61.

gas and water pipes, 61.

schemes which seek to supply energy to other undertakers and not directly to consumers, 59.

electric traction, overhead wires for, 58.

sliding scale, where no liability to purchase, 60.

consent of local authority, should not be required, 60.

but local authority should be entitled to be heard, 60.

earth connection, 61.

foreclosure where companies borrow on mortgage, 61.

liability of plant and rolling stock to distress, 61.

terms of purchase in County of London orders, 60.

## CROSSING,

thoroughfares, angle of aerial lines, 248, 266.

aerial lines crossing metallic substance, 248, 266.

**OUT-OFF,**

high pressure electric line, conductor, or other apparatus shall be protected by suitable automatic quick-acting, 246, 264.  
switch for arc lamps, 252, 270.

**CUTTING OFF SUPPLY OF ENERGY,**

upon failure to pay charge for electricity or other sum due to undertakers in respect of supply, 30, 120.  
on discovery of leakage on consumer's premises, 251, 252.  
    appeal to electric inspector, 252.  
upon failure of consumer to give security after seven days' notice, 186.  
if consumer uses any form of lamp or burner, or uses energy supplied so as to unduly or improperly interfere with supply to others, 186.  
recovery of cost of, as a civil debt, 108 n, 230 n.  
provisions as regards temporary, for repairs, etc., 254.  
case decided as to right of, tenant being in arrear and receiver appointed, 118.

**D.****DAMAGE,**

penalty for wilfully damaging undertakers' works, 228.  
satisfaction for accidentally damaging, 228.  
undertakers to cause as little, as may be, 115, 212.  
    full compensation to be made, 115, 212.  
    arbitration to determine, 115.  
section as to compensation in Electric Lighting Act, 1882...115.  
    Electric Lighting (Clauses) Act, 1899...208.  
    Gasworks Clauses Act, 1847...212.  
compensation to Postmaster-General and local authority in case of non-compliance with section regarding works in or under streets, 169.  
in case of failure to comply with terms of section regarding exercise of powers in streets not repairable by local authority, etc., 171.  
    alteration of pipes or wires which interfere with the exercise of powers of undertakers, 176.  
in connection with the laying of lines near sewers, or gas or water pipes, etc., 178.  
in case of injuriously affecting telegraphic or telephonic wires, 180.  
"damages, cost, or expenses," method of recovering, 108.

**DANGEROUS TRADES,**

enactment of Factory and Workshop Act, 1901, as to, 52.  
electric accumulator works certified to be, 52.  
    special regulations regarding, 53.  
recommendations of Dangerous Trades Committee, 53.

**DATES AND PERIODS TO BE OBSERVED,**

in applications for licences or orders, 10.

**DAYS,**

where something to be done within a certain number of days from notice, Sunday, Christmas Day, etc., not to be reckoned, 201.



**DEFAULT.** *See* PENALTIES.

**DEFICIT ON ELECTRICAL UNDERTAKING,**  
 clause inserted to prevent certain local authorities paying, out of rates,  
 73.

**DENOMINATIONS,**  
 new, of standards for the measurement of electricity, 293.  
 Order in Council, 292.

**DEPOSIT,**  
 memorial for licence or order must be deposited, 7, 236.  
 undertakers applying for licence or order must deposit draft copies of  
 licence or order in print, 236.  
 of map of proposed area of supply, at Board of Trade, 238.  
   the like map for public inspection in office of clerk of the peace and of  
   the local authority, 238.  
   list of local authorities in proposed area of supply, 238.  
   list of authorities, companies, or persons (if any) authorised to supply  
   within the area, 238.  
 list of streets not repairable by local authority, and of railways and  
   tramways (if any) in area, 238.  
   canals and navigable rivers (if any) within area, 238.  
 statement of capital proposed to be expended, 238.  
 of memorandum and articles of association where proposed undertakers  
   are a company incorporated under the Companies Acts, 238.  
 a fee of £50 by cheque to cover expenses, 238.  
 at Board of Trade of objections to the granting of order or licence, 240.  
   clauses and other amendments sought to be inserted,  
   240.

**DEPOSITED MAP,**  
 definition of the expression, in Act of 1899...156.  
*See further, PLAN.*

**DIFFERENCES.** *See* ARBITRATION.

**DISCONTINUING SUPPLY,**  
 upon failure to pay charge for electricity or other sum due to undertakers  
   in respect of supply, 30, 120.  
 on discovery of leakage on consumer's premises, 251, 252.  
   appeal to electric inspector, 252.  
 upon failure of consumer to give security after seven days' notice, 186.  
 if consumer uses any form of lamp or burner, or uses energy supplied so  
   as to unduly or improperly interfere with supply to others, 186.  
 recovery of cost of, as a civil debt, 108 n., 230 n.  
 provisions as regards temporarily, 254.

**DISCOUNTS,**  
 special section in some Acts authorising, 74.

**DISPUTES.** *See* ARBITRATION.

**DISTRESS.** *See* **FITTINGS.**

- electric lines, meters, accumulators, fittings, works, or apparatus of undertakers not liable to, or to be taken in execution under process against the person in whose possession the same may be, 39, 122.
- report of Lord Cross's committee as to rolling stock and plant being liable to, 61.

**DISTRIBUTING MAINS,**

- temporary stoppage of supply through, for repairs, etc., 254.
- suitable and sufficient, to be laid down within two years for general supply in streets specified in Special Order, 23, 181.
- further, in rest of defined area of supply, 181.
- requisition in regard to the laying of additional, 23, 181.
- conditions on which the laying of, may be required, 181.
- definition of, in Act of 1899...155.
- See further*, **TESTING** and **ELECTRIC INSPECTOR.**

**DISTRICT.** *See* **LOCAL AUTHORITY.****DISTRICT AUDITORS ACT, 1879,**

- audit of accounts of local authorities, 139.
- See further*, **AUDIT.**

**DOCKS,**

- protection of persons having power to construct, on land near to any canal, and whose access may be interfered with by wires, 38, 114, 170.
- See further*, **CANAL.**

**DOCUMENTS,**

- to be deposited at Board of Trade on application for licence or order, 238.
- See further*, **DEPOSIT.**

**DRAFT,**

- of proposed licence or order must be deposited at Board of Trade in print, 236.
- what the draft must contain, 237.
- copies of draft to be sold to all persons applying, at price not exceeding one shilling, 237.
- See further*, **DEPOSIT.**

**DRAINS.** *See* **SEWERS.****E.****EARTH,**

- definition of "efficiently connected with earth" in Board of Trade Regulations, 244, 262.
- connection, provisions regarding, in Act of 1899...163.
- Board of Trade Regulations,
  - A. (6) specification of insulating material, 245.
  - A. (8) maintenance of insulation, 245.
  - A. (11) quick-acting cut-off for high pressure lines, etc., 246.
  - A. (17) supports, construction and erection of, 247.
  - A. (29) electric continuity of metal conduits, pipes and casings, 249.
  - A. (32) high pressure lines laid above ground, 249.

**EARTH—continued.**

Board of Trade Regulations—*continued.*

A. (39) treatment of electric lines and apparatus on consumers' premises, 251.

A. (40) transformers and high pressure apparatus to be enclosed in metal, etc., 251.

Board of Trade Regulations regarding non-statutory undertakings,—provisions similar to above, 263, 264, 265, 267, 268, 269.

report of Lord Cross's committee, 1898, that "the ordinary clause which forbids any connection with the earth except with the approval of the Board of Trade and the concurrence of the Postmaster-General, should be inserted in every case," 61.

**EASEMENTS,**

"land" to include, 107.

compulsory acquisition of, for pipes, mains, and other works within area of supply, 56.

the like outside area of supply, 58.

*See further, CROSS'S, LORD, COMMITTEE OF 1898.*

**ELECTRICAL CURRENT,**

ampère, the standard of, 293.

**ELECTRICAL PRESSURE,**

volt, the standard of, 293.

**ELECTRICAL RESISTANCE,**

ohm, the standard of, 293.

**ELECTRICAL STANDARDIZING LABORATORY,**

of Board of Trade, 298.

fees charged at, 299.

**ELECTRIC INSPECTOR,**

appeal to, when supply discontinued for leakage, etc., 252.

appointment of, 27, 190.

by whom to be appointed, 190, 191.

in County of London by London County Council, 27, 191 *n.*, 305.

duties of, 27, 191.

remuneration of, 27, 191.

notice of accidents and inquiries, 192.

electric inspectors may be required by Board of Trade to inquire and report, 192.

testing of mains, 193.

undertakers not responsible for interruption of supply caused by electric inspector when testing, 193.

notice, access, hours, etc., 193.

testing of works, and supply on consumers' premises, 193.

undertakers to establish testing stations, 193.

dispute, arbitration, etc., 193.

undertakers to keep instruments on premises, 194.

readings of instruments to be taken, 194.

may test undertakers' instruments, 194.

representation of undertakers at testings, 195.

**ELECTRIC INSPECTOR—continued.**

- facilities for testings to be given by undertakers, 195.
- to report results of testing, 195.
- expenses of, 195.
- to certify meters, 196.
- powers of, where differences as to correctness of meter, 198.
- special provisions in Power Acts as to appointment, duties, etc., of, 445.

**ELECTRICITY,**

- definition of, in Act of 1882...133.
- "energy" is the phrase employed in provisional orders, and in Act of 1899...133 n., 155.
- obligation on undertakers to supply, 24, 116, 185.
- See further, SUPPLY.*
- charges for, 117.
- penalty for fraudulently using undertakers', 227.
- injuring works of undertakers with intent to cut off supply of, 121.
- stealing, 121.
- See also, POWER ACTS.*

**ELECTRIC LIGHTING ACT, 1882...88.**

- arrangement of sections of, 83.

**ELECTRIC LIGHTING ACT, 1888...144.**

- arrangement of sections of, 84.

**ELECTRIC LIGHTING (SCOTLAND) ACT, 1890...151.**

- arrangement of sections of, 84.

**ELECTRIC LIGHTING (SCOTLAND) ACT, 1902...153.**

- arrangement of sections of, 84.

**ELECTRIC LIGHTING (CLAUSES) ACT, 1899...154.**

- arrangement of sections of and of schedule to, 85.

**ELECTRIC LINE,**

- general powers to lay, 101.
- of undertakers on consumers' premises not liable to distress, etc., 122.
- power to enter to remove, 121.
- definition of, in Act of 1882...133.
- insulation test of, 245, 263.
- leakage, 245, 263.
- high-pressure conductors, 246, 263.
- limit of power in high-pressure, 246, 264.
- protection from lightning, 246, 264.
- aerial lines, 247, 265.
- construction and erection of aerial lines, 247, 265.
- See further, AERIAL LINES.*
- construction of receptacles for, 248, 267.
- crossing conduits, pipes, or casings containing, 249, 267.
- electric continuity of metal conduits, pipes and casings, 249, 267.
- precautions against charging of short length of pipe, etc., 249, 267.
- precautions to be taken when bare conductors are used, 249, 267.

**ELECTRIC LINE**—*continued*.

- high-pressure electric, placed above-ground, 249, 268.
  - laid in proximity to other electric lines, 249, 268.
- undertakers responsible for their lines on consumers' premises, 251, 269.
- responsibility of owner, under 1888 Act Regulations, 269.
- treatment of electric lines and apparatus on consumers' premises, 251, 269.
- arc lighting, 252, 269.
- powers of Act of 1899 as to works, 164.
- in public streets or bridges, 168.
  - streets not repairable by local authority, 170.
- over or under railways, tramways, and canals, 108, 170.
- alteration by undertakers of pipes, wires, etc., under streets, 174.
- near sewer, drain, or gas or water pipes or other electric lines, 177.
- undertakers not to injuriously affect telegraphic or telephonic wires, 179.
- laying of, in subways. *See* SUBWAYS.
  - under special agreement, 182.
- revocation in case of failure to lay, 182.
- requisition to lay, 183.
- inspection of, by electric inspector, 191.
- testing of, 193.

**ELECTRIC TRACTION,**

- overhead wires for, report of Lord Cross's committee that consent of local authority should not be required, 58.

**ELECTROLYSIS.** *See* LEAKAGE AND ELECTROLYSIS.**EMERGENCY,**

- cases of, provided for—
  - telegraphic lines of Postmaster-General, 123.
  - street boxes, 166.
  - lines in or under public streets, 169.
  - streets not repairable by local authority, 171—2.
  - railways, tramways and canals, 171—2.
  - where street authority are exercising powers of undertakers to break up, 173.
  - alteration of pipes, wires, etc., under street, 177.
  - laying lines near sewers, gas or water pipes, etc., 178.
  - telegraphic and telephonic wires, 180.

**ENERGY,**

- definition of, in Act of 1899...155.
- See further, ELECTRICITY.*

**ENSURING PROPER AND SUFFICIENT SUPPLY,**

- regulations of the Board of Trade for, 253.

**ENTRY ON PREMISES,**

- power of undertakers to enter premises supplied, 38, 121.
- undertakers supplying meters at request of consumers entitled to enter premises, 197.

**EVIDENCE,**

- observations of readings of undertakers' instruments receivable as (s. 42), 194.
- readings of instruments recorded by electric inspector receivable in (s. 43), 194.
- report of electric inspector, of results of testing, receivable in (s. 47), 195.
- register of meter (in absence of fraud) conclusive (s. 57), 198.  
case in which held not conclusive, 198 n.
- documents, sealed by Board of Trade or signed by secretary or assistant secretary (s. 72 (2)), 206.
- certificate signed by President of Board of Trade, to be conclusive (s. 72 (3)), 206.
- what shall be *primâ facie*, of intention to alter meters, etc., 229.

**EXECUTION. See DISTRESS.****EXECUTION OF WORKS,**

- authority for, 101, 164.
- security for, 49, 159.
- system to be approved in writing by Board of Trade, 163.
- notice of, in various cases. *See under NOTICE.*

**EXPENSES,**

- of local authority, how to be defrayed, 97.
- electric inspector, 195.
- providing new meters where method of charge altered, 199.
- application of money received by local authority, 161.

**EXTRA HIGH PRESSURE,**

- definition of, in Board of Trade Regulations, 244.
- limitations of, 244.
- Board of Trade have sanctioned in many cases, 244 n.

**F.****FACTORY AND WORKSHOP ACT, 1901,**

- works for generating or transforming electricity come within, 52.
- electric accumulator works certified to be dangerous or injurious under, 52.  
special regulations in regard to such works, 53.
- recommendations of dangerous trades committee, 53.
- accidents causing death or bodily injury to be reported to district inspector, 54, 192.

**FAILURE. See PENALTIES.****FIRE,**

- precautions to avoid, on consumers' premises, 251, 269.
- discharge of pressure in case of, 248, 266.

**FITTINGS,**

- what powers companies and municipal corporations have to supply, 29, 122.

**FITTINGS**—*continued*.

- not liable to distress or to be taken in execution against the person in whose possession the same may be, 39, 122.
- of undertakers, power to enter premises to remove, 38, 121.
  - consumer must be in good order and condition, etc., to enable him to demand supply, 186.

**FORECLOSURE,**

- Report of Lord Cross's committee as to whether companies borrowing on security of the undertaking by mortgages, should be liable to, 61.

**FORESHORE,**

- saving rights of the Crown in the, 208.
- of rivers, cables, etc., in or across under Power Acts, 170 n.

**FORM,**

- of lamp or burner not to be prescribed by undertakers, 115.
- accounts prescribed by Board of Trade for a local authority, 274.
  - the like for a company, 282.
- Board of Trade regulations, 243, 261.
- provisional order, 231.

**FUSE,**

- or other automatic disconnector to be inserted in each service line within consumers' premises, 251, 269.

**G.****GAS,**

- company desirous of supplying electricity, 93 n.
- incorporation of various sections of Gasworks Clauses Acts, 1847 and 1871...106, 164, 211.
- incorporated sections set out, 212 *et seq.*
- for above purpose "gas" means "electricity," 107, 211.
- when Board of Trade may relieve gas undertakers of obligation to supply, 27, 132.
- street boxes to be provided with ventilation, etc., for immediate escape of, 250, 268.
- regular inspection of street boxes for the presence of, 250, 268.
- provisions regulating the laying of electric lines, etc., near gas or water pipes, etc., 177.

**GENERAL ACTS,**

- undertakers not to be exempt from provisions of, 134, 210.

**GENERAL SUPPLY,**

- definition of, in Act of 1899...156.
- See further, SUPPLY.*

**GENERATING STATION,**

- the policy of the Electric Lighting Acts is against acquisition of land by compulsory powers, 18, 101 n., 107 n.
- Lord Cross's committee of 1898, as to generating stations, etc., 55, 353.
- questions referred to them for consideration and report, 55.

**GENERATING STATION**—*continued*.

Lord Cross's committee of 1898, as to—*continued*.

*Inside* area of supply the committee report favourably of "compulsory powers for acquiring sites for generating stations and lands or easements for pipes and mains therefrom and other works," 56.

*Outside* area of supply the committee report favourably of "compulsory powers for the acquisition of land for a generating station and lands or easements for pipes and mains and other works to the area of supply," 58.

mains to connect outside generating station with area of supply, 58, 70.

several precedents, 70.

*See this subject more fully under* CROSS'S, LORD, COMMITTEE OF 1898.

Standing Orders requiring land for, to be defined in Bill, 102 n.

Order of Home Secretary, exempting from lime-washing, in certain cases, 54.

**GOOD FRIDAY,**

when not to be reckoned in computation of number of days, 201.

**GUARD WIRES**

on electric tramways, regulations of Board of Trade as to, 392—396.

**H.****HEIGHT,**

from ground, of aerial lines and distance from buildings, etc., 247, 266.  
of arc lamps, 252, 270.

**HIGH PRESSURE,**

definition of, in Board of Trade regulations, 244, 262.

extra, defined, 244.

limitations of, 244, 262.

conductors to be covered, 246, 263.

testing of insulation of all parts of any high-pressure circuit, 246, 264.

quick-acting cut-off for high-pressure lines, conductors or other apparatus, 246, 264.

transformers, 246, 264.

limit of power in high-pressure electric line, 246, 264.

lines laid above ground or in subways, to be completely enclosed, 249, 268.

in proximity to other electric lines or to the surface of the ground, 249, 268.

transformers and high-pressure apparatus on consumers' premises, to be completely enclosed in solid walls or in strong metal casing efficiently connected with earth, 250, 269.

**HIGHWAY ACT, 1835.**

penalty under, for breaking up streets, 213.

**HOOR,**

power to enter premises supplied at all reasonable times, 121.

day and, for proving compliance, six days' notice of, 10, 241.

hours of access to street boxes, 166.

testing of mains by electric inspector, 193.



**HOUSING OF THE WORKING CLASSES ACT, 1893.***See* **STANDING ORDERS.**

reference to, in Report of Lord Cross's committee of 1898...57.

**I.****INDICTMENT,**

for breaking up streets without authority, 213.

when undertakers not exempted from, for nuisance, 19, 209.

*See fully under* **NUISANCE.****INDUCTION,**

protection of telegraphic lines of Postmaster-General, 124.

of telegraphic and telephonic wires, 179.

*See* **BOARD OF TRADE REGULATIONS.****INJUNCTION,**

to restrain breaking up of streets without authority, 213.

nuisance from electric works, cases regarding, 102, 209.

*See more fully under* **NUISANCE.****INJURIOUSLY AFFECTING,**

telegraphic line of Postmaster-General, 123.

fines in relation to, 123.

wires or lines used for telegraphic, telephonic, or electric signalling communication, 179.

where fittings of consumer injuriously affect use of energy by undertakers or other persons, undertakers not bound to afford supply, 186.

*See further,* **COMPENSATION.****INJURY.***See* **DAMAGE and INJURIOUSLY AFFECTING.**

protection from, by lightning, 246, 264.

personal, regulations for securing the safety of the public from, 96, 243.  
accidents causing or likely to have caused, to be reported by undertakers to Board of Trade, 192.*See further,* **ACCIDENTS.**

by steam rollers, 222.

by traction engine, 222.

to meters, 228.

works of undertakers with intent to cut off supply of electricity, 121.

telegraphic line of Postmaster-General, 123.

or telephonic wires, 179.

**INQUIRY BY BOARD OF TRADE,**

before granting licences or orders, 9, 91 n, 242.

into cause of any accident affecting the safety of the public, 49, 192.

*See further,* **ACCIDENTS.****INSPECTION. See** **ELECTRIC INSPECTOR and ENTRY ON PREMISES.**

## INSTRUMENTS,

## INSULATION,

**INTERPRETATION.**

## INVENTIONS,

## IRELAND,

**IRIDIO-PLATINUM WEIGHT.**

J.

## JOINT BOARD

Digitized by Google

## JOINT COMMITTEES OF BOTH HOUSES OF PARLIAMENT,

- 1892. Electric and Cable Railways (Metropolis), 418, 426.  
RIGHT HON. JAMES STANSFELD, CHAIRMAN, 418.
- 1893. Electric Powers (Protective Clauses), 343.  
VISCOUNT CROSS, CHAIRMAN, 343.
- 1898. Electrical Energy (Generating Stations and Supply), 55, 353.  
VISCOUNT CROSS, CHAIRMAN, 55.  
*See more fully under Cross's, LORD, COMMITTEE OF 1898.*
- 1901. London Underground Railways, 427.  
LORD WINDSOR, CHAIRMAN, 427.

JUDGE. *See* SUMMARY JURISDICTION.

## JUSTICES,

*See further, SUMMARY JURISDICTION.*

- jurisdiction of, in connection with breaking up of streets, 225.
- recovery of penalties before, 107, 108, 207. *See further, PENALTIES.*
- liability of, to charges for electricity, not to disqualify from acting, 230.

## L.

## LAMP,

- undertakers not entitled to prescribe any special form of, 30, 115.
- proviso as to unduly or improperly interfering with supply of electricity to other consumers, 30, 115, 116.  
arbitration in such case, 116.
- accidentally damaging pipes, posts, or lamps of undertakers, 228.
- supply to public. *See* PUBLIC LAMPS.
- arc. *See* ARC LAMPS.

LAND. *See also* PRIVATE LAND, STREETS, ETC.

- under Electric Lighting Acts, 1882 and 1888,
  - may be taken only by agreement, 18, 19, 101, 107.
  - no limit as to quantity in the case of companies, 101.
  - limit of five acres in the case of local authorities, 102.
  - includes easements in or relating to, 107.
- under Electric Lighting (Clauses) Act, 1899,
  - undertakers may (*i.e.*, by agreement) acquire lands by purchase or on lease, 162.
  - power to use such lands, 162.
  - when consent of Local Government Board necessary, 162.
  - houses of the labouring class, 162, 163.
- Report of Lord Cross's committee, 1898,
  - where generating station is to be *within* area of supply they recommend compulsory powers "for acquiring sites for generating stations, and lands or easements for pipes and mains therefrom and other works," 56.
  - where generating station is *without* area of supply they recommend compulsory powers for "acquisition of land for generating station and lands or easements for pipes and mains and other works to the area of supply," 58.

**LAND—continued.**

Report of Lord Cross's Committee, 1898—*continued.*

no public legislation to carry out this recommendation, 61.

numerous instances of compulsory powers having been given by Act, 61—70.

how the question of nuisance is dealt with in such cases, 61—70.

*See further, NUISANCE.*

Standing Orders as to Bills relating to construction of generating station, 102.

under Tramways Act, 1870,

no power to acquire lands otherwise than by agreement, 374.

under Light Railways Act, 1896,

Lands Clauses Acts may be incorporated with order with variations, 375.

power may be given to take land compulsorily, 375.

under Power Acts,

power is given to take land compulsorily, 444.

**LANDS CLAUSES ACTS,**

incorporation of, with Act of 1882, subject to certain exceptions, 106.

exception of enactments with respect to compulsory purchase of land and entry upon lands, 106, 107 *n.*

in construction of, land (by the Act of 1882) includes easements in or relating to lands, 107.

interpretation of, in Act of 1882...133.

as to powers to take land compulsorily. *See under LAND and COMPENSATION.*

**LARCENY,**

person maliciously or fraudulently abstracting, consuming, using, etc., electricity, guilty of simple, 121.

**LEAKAGE AND ELECTROLYSIS,**

*National Telephone Co. v. Baker*, facts stated, 339 *et seq.*

the Leeds provisional order did not contain a "No Nuisance" clause, 340.

joint committee on Electric Powers (Protective Clauses) 1893...343.

protective clauses theretofore in use, 344.

lists of the Acts in which the same had been inserted, 345, 346.

evidence of the late Sir Courtenay Boyle, K.C.B., 347.

clause suggested by the joint committee, 349.

recommendations of joint committee, 351.

recommendations of joint committee on Electrical Energy (Generating Stations and Supply), 1898...353.

form of model clause now in use for protection against damage by, 368.

special clauses granted by committees in some cases, and refused in others, 354, 356 *et seq.*

action of the Board of Trade, 359 *et seq.*, 364, 365 *n.*

action of Court of Referees, 361.

many cases in which special clause introduced by agreement, 365 *et seq.*

**LEAKAGE AND ELECTROLYSIS**—*continued*.

model clause not inserted in Lighting Orders, 368.

Power Acts, 368.

is inserted in Tramway Acts authorising electric traction,  
368.

in Railway Acts and Light Railway Orders authorising  
electric traction, 368.

*Cape Town Case* regarding, 370 *et seq.*

decision of the Judicial Committee of the Privy Council, 373.

provisions in Board of Trade regulations in regard to leakage,—

prevention, testing for, and remedying of, 245, 263.

from high pressure system, 246, 263.

connection not to be made, where leakage would result, 251.

discontinuing supply to consumer on discovery of, 251.

consumers' fittings may be tested for, 252.

**LEVEL,**

tramways or railways crossing highway on the, special provision of  
Power Acts as to, 109, 165 *n*, 441.

**LICENCE,**

Board of Trade authorised to grant, to any local authority or person,  
5, 89.

period of, 5, 89.

Board of Trade return regarding, 5.

consent of local authority required, 6, 89.

local authority applying for, have preference, 91 *n*, 241.

inquiry, 91, 242.

how applied for, 89, 236—8.

rules of the Board of Trade regarding applications for, 235.

consent of local authorities, 235.

notices, 236.

application and deposits, 236.

procedure, 239.

regulations to be inserted in licences, etc., regarding limits, regular  
supply, safety of public, price, etc., 95.

further regulations from time to time may be made and amended by  
Board of Trade, 96.

byelaws authorised to be made by local authority, 96.

*See further*, BOARD OF TRADE REGULATIONS.

local authority desiring to apply for, must pass resolution after one  
month's notice, 90, 93.

not to be granted until after lapse of three months from advertisement,  
89.

dates and periods to be observed in applications for, 11.

**LIGHTNING,**

protection from, 246, 264.

**LIGHT RAILWAYS ACT, 1896,**

appointment of light railway commissioners, 397.

effect of order of commissioners when confirmed by Board of Trade, 397.

number of applications made and granted for electro-motive power, 397.

**LIGHT RAILWAYS ACT, 1896—continued.**

- Lands Clauses Acts and power to take land compulsorily, 375, 397.
- provisions generally to be found in orders under, 397, 398.
- form of clause authorising motive power, 398.
- usual clause in order authorising Board of Trade to make regulations, 399.
- leakage and electrolysis—model clause, 400.
- regulations made by the Board of Trade, 400.
- electrolytic action on gas and water mains and pipes, 359, 365.
- See further, LEAKAGE AND ELECTROLYSIS.*
- return of accidents to Board of Trade, 400.
- reference to, in Report of Lord Cross's committee, 57.
- definition of "Act of Parliament" in Telegraph Act, 1878, includes an order authorising a light railway, 124 n.

**LIME-WASHING,**

- order of Home Secretary as to, under Factory and Workshop Act, 1901, 54.

**LIMITS OF SUPPLY. *See* AREA OF SUPPLY.****LIST**

- of local authorities to be deposited at Board of Trade, 238.
- authorities, companies, or persons already authorised to supply within area, 238.
- streets not repairable by local authority, 238.
- railways and tramways (if any), 238.
- canals and navigable rivers (if any), 238.
- of tube and other railways authorised to be worked by electric power, 403.
- of Power Acts, 434.

**LOANS. *See* BORROW and MORTGAGES.****LOCAL AUTHORITY,**

- definition of, in Act of 1882...133.
- in Scotland, 135.
- may obtain licence or order, 7, 89, 92.
- consent of, to licence, required by Act of 1882...89.
- to order required by Act of 1888...6, 144.
- only to be given after a month's notice of meeting, 90, 93.
- Board of Trade may dispense with consent in case of a provisional order, 6, 74 *et seq.*, 144.
- special report in such case, 6, 144.
- instances of such dispensation, 75.
- may obtain power to supply in district of another local authority, 90, 93.
- as road authority. *See* BREAKING UP STREETS.
- authorised to make byelaws for safety of public in addition to those made by the Board of Trade, 96.
- none such made, 96 n.
- byelaws by, under s. 13 of the Public Health Acts Amendment Act, 1890...97 n, 271.
- expenses of, 97.
- power of, to borrow, 98.
- regulations as to exercise of borrowing powers, 98.

**LOCAL AUTHORITY**—*continued*.

accounts to be kept and audited, 18, 100, 137, 139, 141, 143.

form of accounts prescribed by Board of Trade, 274.

limited power to acquire land, 101, 162.

*See further, LAND.*

contracts of urban authorities, 103.

on obtaining provisional order may contract for works or supply, 105.

the lighting of any hall or building belonging to, is within "public purposes," 89.

may exercise powers of undertakers for breaking up streets, 90, 172.

in Scotland, 140.

delegation by certain local authorities in Scotland, 151.

amount and period of repayment of loans for electric lighting, 153.

purchase of undertaking from a company, repealed provisions of Act of 1882...129.

provision of Act of 1888 as to purchase, terms, arbitration, etc., 145.

terms of purchase in Act of 1888, may be varied by provisional order, 146.

county of London orders, 147 *n*.

prohibition of supply beyond area of supply, 158.

*See AREA OF SUPPLY.*

powers of, under Electric Lighting (Clauses) Act, 1899, relating to—

security and accounts, 159.

the placing of lines above-ground, 163.

purchase and use of land, 101, 162.

*See further, LAND.*

street boxes, 165.

electric works in or under public streets or bridges, 168—9.

exercise of powers of undertakers to break up streets, 172.

electric lines near sewers, etc., 177.

revocation of order on failure of undertakers to lay down mains, 182.

requisition by, on undertakers to lay mains, 185.

supply to public lamps, 187.

price and method of charging, 189.

maximum prices, 189.

price to public lamps, 190.

appointment of electric inspectors, 190.

remuneration of electric inspectors, 191.

establishment of testing stations, 193.

readings of instruments, 194.

differences as to correctness of meter, 198.

map of area of supply, 199, 200.

application of money received by, 161.

of moneys arising from disposal of lands, 161.

protection of officers and members of, from personal liability, 50, 163.

service of notices, 200.

revocation of order where undertakers insolvent, 201.

undertaking cannot be carried on with  
profit, 201, 202.

by consent, 202.

where order in favour of a company revoked, 202.

**LOCAL AUTHORITY**—*continued*.

- powers of, under Electric Lighting (Clauses) Act, 1899, etc.—*continued*.
  - publication of regulations, 205.
  - extension of time, 207.
  - notice of application for, 207.
  - recovery and application of penalties, 207.
- protection of, under Public Authorities' Protection Act, 1893...50, 163.
- transfer of undertaking from, to a company, not now favoured by Board of Trade, 105.
- See further under TRANSFER.*
- supply of energy over an area including numerous local authorities, and involving plant of exceptional dimensions and high voltage, 59.
- purchase by local authority in the above case and generally, 59—61.
- See further, CROSS'S, LORD, COMMITTEE OF 1898.*
- when consent of rural district council not to be unreasonably withheld under Power Acts, 111 n, 164 n, 439.
- power of Board of Trade, 439.
- clause inserted on opposition of South Metropolitan Gas Co., to prevent certain Metropolitan Local Authorities from paying deficit on electric lighting undertakings out of rates, 73.

**LOCAL GOVERNMENT BOARD,**

- consent of, to borrowing, etc., 139.
- approval of, on purchase and use of land by local authority, 162.

**LOCAL INQUIRY.** *See INQUIRY BY BOARD OF TRADE.***LOCAL LOANS ACT, 1879,**

- powers of borrowing under, 98.

**LOCAL RATE,**

- expenses of local authority may be defrayed out of, 97.
- definition of, 136, 138, 140, 142.

**LOCH LEVEN WATER POWER ACT, 1901,**

- various provisions of, 447, 448.

**LONDON BUILDING ACT, 1894.** *See LONDON, COUNTY OF.***LONDON, CITY OF,**

- Commissioners of Sewers of, merged in City Corporation, 32, 103, 326 n.
- members of Corporation "directly or indirectly interested or concerned in contract, 103 n.
- "reasonable expenses" of electric inspector in, 195, 196.
- provisions of London Overhead Wires Act, 1891, relating to, 326, 327, 330, 331.
- See LONDON OVERHEAD WIRES ACT, 1891.*
- protection of officers, etc., in, under Public Health (London) Act, 1891, sect. 124...163.

**LONDON COUNTY COUNCIL,;**

- borrowing powers of, 137.
- audit of accounts of, 137.



**LONDON COUNTY COUNCIL—continued.**

powers of Metropolitan Board of Works transferred to, 136, 137.

*See further, LOCAL AUTHORITY.*

powers under London Overhead Wires Act, 1891...136 *n.*

powers of, in County of London Provisional Orders, 303—6.

in regard to establishment of testing stations, 312.

in regard to protection of theatres, etc., from fire, 315.

*See further, LONDON, COUNTY OF, and SUBWAYS.*

**LONDON, COUNTY OF,**

points in which a provisional order in, differs from other provisional orders, 303.

subways, 303.

saving for embankment, park, and open space vested in County Council, 304.

saving for River Thames, 304.

purchase, 60, 147, 304.

various other points of difference, 304—306.

maximum price and revision of price, 190 *n.*

competition and overlapping in, 306.

some leading instances, 306—307.

Sir A. Binnie's complete list down to end of Session 1897...308—309.

a later list, taken from *London Statistics*, 1900—1901...310—311.

non-statutory companies supplying electricity in, 311.

establishment of testing stations by the London County Council, 312.

rules made by the London County Council with approval of Board of Trade, 312.

protection of theatres and places of public resort from fire, 315.

statutory powers enabling regulations to be made, 315, 316.

regulations made, 316.

London Overhead Wires Act, 1891.

*See under LONDON OVERHEAD WIRES ACT, 1891.*

Electric Lighting (London) Bill of Sessions 1901 and 1902...334.

Board of Trade circular regarding, 334.

London Building Act, 1894, street boxes held to be within, 166 *n.*, 167 *n.*

**LONDON GOVERNMENT ACT, 1899,**

transfer of powers and duties under Acts of 1882 and 1888 to the borough councils, 136.

alteration of boundaries consequent on, 334.

*See further, LONDON, COUNTY OF.*

**LONDON OVERHEAD WIRES ACT, 1891,**

London County Council authorised to make bye-laws, 31.

the Act set out at length, 325.

Act or bye-laws not to apply to undertakings acting under special Act, Provisional Order, or licence under Electric Lighting Acts, 325 *n.*, 330.

not to apply to private wires under certain conditions, 325 *n.*, 331.

overhead wires for lighting purposes not to be allowed except to statutory undertakers, 325 *n.*, 331.

new underground wires not to be placed except in accordance with bye-laws, 327.

**LONDON OVERHEAD WIRES ACT, 1891—continued.**

the Act set out at length—*continued.*

- rights over private property not to be acquired except by agreement, 327.
- bye-laws authorised to be made by London County Council, 327.
- enforcement of bye-laws, 328.
- inspectors of overhead wires to be appointed, 328.
- removal of overhead wires, 329.
- liability for accidents, 329.
- arbitrator where any matter is referred to arbitration, 329.
- notice of legal proceedings, 329.
- penalties and application, 330.
- bye-laws made by London County Council, 332.

**M.****MAIN,**

definition of, in Act of 1899...155.

*See* **DISTRIBUTING MAINS and TESTING AND INSPECTION.**

**MAINTENANCE,**

of insulation, 245, 263.

aerial line efficiently, as regards both electrical and mechanical conditions, 248, 266.

**MANAGER AND RECEIVER,**

not an incoming tenant but a caretaker, 120 *n.*

*See* **TENANT.**

**MANCHESTER AND LIVERPOOL ELECTRIC EXPRESS RAILWAY ACT, 1901,**

railway authorised in accordance with the system known as the monorail system, 415.

special provisions for protection of passengers and the public, 415—416.

**MAP,**

definition of "deposited map" in Act of 1899...156.

of area proposed to be supplied to be deposited at Board of Trade on application for licence or order, 238.

of supply to be made and kept by undertakers, 199.

to be from time to time corrected and sections made, 199.

and sections to be open to inspection, 199.

penalty for default, 200.

and plan of underground tube railway works, etc., 423.

Power Acts generally incorporate s. 60 of schedule to the Act of 1899... 442.

*See further, PLAN.*

**MAXIMUM,**

prices, 189, 234.

*See* **PRICE.**

current in conductors, 245, 262.

intervals between supports of aerial line, 247, 265.

**MAXIMUM POWER,**

- which consumer may demand, 25, 187.
- alteration of, expenses, arbitration, 25, 187.

**MEASUREMENT,**

- of electricity, new standards for, 292.
- by meter, 196.

*See further, METERS,*

**MEMORANDUM OF ASSOCIATION,**

- altering, so as to include power to obtain provisional order and supply electricity, 93 n, 94 n.

**MEMORIAL,**

- applications for licences or orders to be made by, 236.

**METERS,**

- of undertakers, power to enter premises to remove, 39, 122.
- not liable to distress, or to be taken in execution against the person in whose possession the same may be, 122.
- amount of energy supplied to be ascertained by appropriate, 196.
- to be certified as correct by electric inspector, 196.
- "certified meter," 196.
- electric inspector to examine and certify on payment of prescribed fee, 196.
- undertakers to supply, if required to do so, 197.
- undertakers' officer, etc., may enter premises, 197.
- consumers not to connect or disconnect without notice, 197.
- consumer owning meter to keep in repair, 197.
- undertakers may let for hire, with "any fittings thereto," 198.
- to keep meter let for hire in repair, 198.
- differences as to correctness of, to be settled by inspector, 198.
- when to be conclusive evidence, 198.
- expense of providing new, where method of charge altered, 199.
- undertakers may place, to measure supply or check measurement, 199.
- coin-meter, 29.
- Power Acts, provisions of, regarding, 196, 442.
- special provisions of two of the Power Acts, 196 n.

**METHODS OF CHARGING. *See* PRICE.****METROPOLITAN BOARD OF WORKS,**

- powers of, transferred to London County Council, 136 n.

**METROPOLITAN BOROUGH COUNCILS,**

- powers of, under Electric Lighting Acts, 136 n., 334.

**MINES AND MINERALS,**

- saving for rights of owner, etc., of any, to work the same, 134, 222 n.

**MINIMUM**

- size of conductors, 245, 263.

**MODEL; CLAUSE,**

- for prevention of damage by electrolytic action, form of, 368.
- See more fully under LEAKAGE AND ELECTROLYSIS.*

**MONOPOLY,**

granting of licence or order confers no, 144.

**MONORAIL.** *See* MANCHESTER AND LIVERPOOL ELECTRIC EXPRESS RAILWAY ACT, 1901.

**MORTGAGES,**

undertakers being a company may borrow on security of, of the undertaking, 208.

on transfer to local authority, under Act of 1888, s. 2, mortgages shall not be a charge on the undertaking, 208.

mortgage deed to be endorsed with notice to that effect, 208.

*See further, BORROW.*

report of Lord Cross's committee as to whether companies should be subject to foreclosure, 61.

**MOTIVE POWER,**

form of clause in regard to, in Tramway Acts or Orders, 376.

authorises Board of Trade to make regulations, 376.

model clause as to use of electrical power, 376.

Board of Trade regulations. *See* BOARD OF TRADE REGULATIONS.

form of clause in regard to, in Light Railway Orders, 398.

Board of Trade Regulations, 398—400.

*See further, BOARD OF TRADE REGULATIONS.*

**MUNICIPAL CORPORATIONS ACTS,**

Act of 1835...138 n., 139 n.

Act of 1882...138 n.

**N.****NATIONAL TELEPHONE CO.,**

cases as to privileges of Postmaster-General and, in connection with the breaking up of streets, 217—221.

**NEGLIGENCE,**

of contractors, liability of undertakers for, 219.

report of Lord Cross's committee as to whether undertakers should be responsible for nuisance or only for, 57.

*See further under NUISANCE.*

**NEIGHBOURING DISTRICT.** *See under* AREA OF SUPPLY.

**NON-STATUTORY COMPANY,**

liable to bye-laws under Public Health Acts Amendment Act, 1890 (adoptive), 271 n.

regulations of Board of Trade under s. 4 of Act of 1888...147.

regulations made by Board of Trade, 261.

bye-laws under London Overhead Wires Act, 1891...332.

local authority seeking electric lighting powers in competition with existing, 8, 112 n.

*Leamington Case*, 9.

*Felixstowe Case*, 112 n.

**NOTICE,**

preliminary to obtaining licences or orders. *See* LICENCE and PROVISIONAL ORDER.

resolution after one month's notice—a preliminary step where local authorities are undertakers, 90, 93.

by promoters to local authority of district proposed to be supplied, 92 *n.*, 236.

by undertakers to local authority of intention to supply through any feeding, charging, or distributing main, 253.

to purchase undertaking of company, 145.

the like where order of company revoked, 202.

provisions in Board of Trade Rules relating to, 236.

under Telegraph Act, 1878...125.

of works with plan before breaking up streets, 168, 224.

to be served on Postmaster-General and local authority, 168.

in the case of private streets, railways, tramways, and canals, 170.

street authority desiring to exercise powers of breaking up, 172, 173.

Power Acts limit the period of notice, 174 *n.*

alteration of pipes, wires, etc., under streets, 175.

laying electric lines near sewers, or gas, or water pipes, 177.

County of London Orders, 178 *n.*

lines near telegraphic or telephonic wires, subways, 180.

electric line under special agreement, 182.

a consumer demanding a supply, 185.

to consumer requiring security, 186.

price and method of supply, 189.

of accidents and inquiries thereupon by Board of Trade, 192.

*See further, ACCIDENTS.*

may be printed or written, 200.

service of, 200.

of application for extension of time and approval of Board of Trade, 207.

where an act is to be done within a specified number of days after,

when Sunday, Christmas Day, etc., not to be reckoned, 201.

report of Lord Cross's committee on the subject of notices, 57.

**NUISANCE,**

no clause relating to, in Electric Lighting Acts, 19.

nevertheless a clause was generally inserted in Provisional Orders, providing that undertakers should not be exonerated from indictment action or other proceeding for, 19, 102 *n.*

section 81 of schedule to Electric Lighting (Clauses) Act, 1899, so provides, 209.

Joint Committee Electrical Energy (Generating Stations and Supply), 1898...55.

reference included *inter alia* question of acquiring land compulsorily for generating stations and the question of nuisance, 55.

report of committee against nuisance clause where the land for site is acquired under compulsory powers, 57.

leaving company only liable for negligence, 57.

*Geddis v. Proprietors of Bann Reservoir*, 19, 57, 209.

**NUISANCE**—*continued.*

numerous instances of Acts authorising compulsory acquisition of lands, etc., without a nuisance clause, 61—70.

some exceptional instances—

Devonport, 1900...63.

West Ham, 1900...63.

Blackburn, 1901...64.

Mansfield, 1901...64.

Portmadoc, 1901...65.

Stalybridge, 1901...65.

Dartford, 1902...66.

where generating station, etc., is authorised on land to be taken by agreement the nuisance clause is inserted, 21.

decision in *London, Brighton and South Coast Railway Co. v. Truman*, 21.

how dealt with in tube, etc., railways worked by electricity—

generally compulsory powers given without any nuisance clause.

exceptional provisions. *See instances stated above.*

some exceptional provisions in regard to taking care to prevent nuisance by vibration, 406, 407, 409, 412.

special clause inserted in Acts of Session 1902 regarding damage by the working of railway within two years from opening, 420.

Power Acts, how question of nuisance dealt with in, 443.

black smoke, cases as to, 209 n.

cases relating to nuisance, 102.

**O.****OBJECTORS,**

to licences or orders, how to proceed, 8, 240.

**OBLIGATION TO SUPPLY.** *See SUPPLY.***OBSERVATORIES, LABORATORIES, ETC.,**

clause for protection of, and of instruments or apparatus in, 369.

forms part of the Model Clause as to use of electrical power, 369.

**OHM,**

standard of electrical resistance defined by Order in Council, 293.

limits of accuracy attainable in ohm standard, 293.

**OPERATORS,**

definition of, in sect. 18 of the schedule to Act of 1899...177.

*See further under PIPES.*

**ORDER,**

provisional. *See PROVISIONAL ORDER.*

in Council, legalising new denominations of standards for the measurement of electricity, 292.

standing orders. *See STANDING ORDERS.*

**OVERHEAD TROLLEY SYSTEM.** *See under TRAMWAY.*

**OVERHEAD WIRES.** *See also* **AERIAL LINES.**

provisions of Electric Lighting Act, 1882—

undertakers not to place any electric line above-ground, along, over, or across any street without express consent of local authority, 30, 109.

local authority may require undertakers to remove, where placed contrary to sect. 14 of Act of 1882...31, 109.  
themselves remove and recover expenses, 31, 109.

court of summary jurisdiction may order removal notwithstanding consent of local authority, 31, 109, 110.

special provisions in the special Acts of various municipal corporations authorising removal of unauthorised, 111, 112.

the *Wandsworth Case* relating to overhead wires, 110.

action by a householder for injunction, 111.

London Overhead Wires Act, 1891...31, 325.

the Act set out, 325.

*See more fully under* **LONDON OVERHEAD WIRES ACT, 1891.**

bye-laws made by London County Council under, 332.

in London Orders consent of County Council and Board of Trade required, 164 n.

provisions of Electric Lighting (Clauses) Act, 1899—

undertakers not to place any electric line above-ground except with express consent of Board of Trade and local authority, 163.

exception where premises in sole occupation or control of undertakers, 163.

of so much of any service line necessarily so placed for the purposes of supply, 163.

Board of Trade regulations regarding aerial lines, 247, 265.

aerial lines—

definition of, in Board of Trade regulations, 243, 261.

maximum interval between supports, 247, 265.

construction and erection of supports, 247, 265.

attachment of aerial lines, 247, 266.

height from ground and distance from building, etc., 247, 266.

service lines from, 247, 266.

angle of crossing thoroughfares, 248, 266.

crossing or in proximity to metallic substance, 248, 266.

suspending wires, 248, 266.

discharge of pressure in case of fire, 248, 266.

maintenance, 248, 266.

disused aerial lines to be removed, 248, 267.

high pressure lines above ground or in subways, 249, 268.

removal of, where placed before obtaining of provisional order, 232.

overhead wires for traction, recommendation of Lord Cross's committee as to consent of local authority, 58.

Power Acts provide that consent of rural district council to, shall not be unreasonably withheld, 111, 164, 439.

appeal to Board of Trade, 111, 164, 439.

**OVERLAPPING.** *See* **COMPETITION.**

**OWNER,**

definition of, in regulations under Act of 1888...261.

*See further, CONSUMER and SUPPLY.*

**P.****PARLIAMENT,**

confirmation of provisional order by, 93.

joint committees of. *See* JOINT COMMITTEES.

**PATENTED OR PROTECTED PROCESSES,**

undertakers may acquire, under Electric Lighting Acts, 101.

Tube Railway Acts, 423.

Power Acts, 438.

**PENALTIES,**

generally, 46 *et seq.*

for failure of undertakers to keep for sale copies of accounts, 100.

delay in reinstating streets, 226.

fraudulently using energy, 227.

wilfully removing or damaging pipes, etc., 228.

injuring meters, 228.

under Highway Act, 1835, for breaking up streets without authority, 213.

Public Health Act, 1875, for the like, 213.

Act of 1882 authorises regulations enforceable by, 96.

defaults, subject to—

removing, etc., covering of street boxes during hours other than those prescribed by local authority, 46, 166.

works in, under, etc., public streets or bridges, 46, 169.

streets not repairable by local authority, 46, 171.

as to breaking up streets where local authority undertake that work, 46, 173.

altering position of pipes, wires, etc., which interfere with undertakers' powers, 47, 178.

laying of electric lines (other than service lines) near sewers or gas or water pipes, or other electric lines, 47, 178.

telegraphic and telephonic wires, 47, 180.

in laying distributing mains, 47, 182.

affording supply to owner or occupier, 47, 187.

supplying public lamps, 47, 187.

energy in accordance with Board of Trade regulations, 47, 188.

giving notice of accident, 47, 192.

affording facilities for inspection and testing, 47, 195.

connecting or disconnecting meters without notice, 47, 197.

keeping, etc., map of area of supply, 47, 48, 200.

abating or discontinuing work on order of Board of Trade, 48, 205.

obeying order of Board of Trade forbidding use of line or work, 48, 205.

keeping for sale copies of Board of Trade regulations, 48, 205.

complying with Regulations (A.) for securing the safety of the public, 48, 253.

(B.) for supplying energy, 48, 256.



**PENALTIES**—*continued.*

defaults, subject to—*continued.*

breaking up streets otherwise than as authorised, 48, 226, 227.

serving notice on Postmaster-General before beginning work,  
48, 126.

complying with reasonable requirements of Postmaster-General,  
48, 126.

destroying or injuring telegraphic line of Postmaster-General,  
48, 127.

obstructing Postmaster-General in placing, maintaining, or  
repairing telegraphic line, 48, 127.

failure to comply with requirements of any notice served by Board  
of Trade or Postmaster-General, 48, 148.

definition of "daily penalty" in Act of 1899...156.

recovery of, 107, 108 *n.*, 207, 229 *n.*

and application of, under Act of 1899...207.

prosecution for, and recovery of, under Telegraph Acts, 127, 128.

**PERIODS,**

dates and, to be observed in applications for licences or orders, 10, 11.

**PERSON,**

order or licence may be granted to, 89, 92.

**PIPES,**

alteration of position of, under streets, etc., where exercise of under-  
takers' powers interfered with, 22, 113, 174.

placing pipes, etc., against buildings. *See* BUILDINGS.

*See further,* ALTERATION OF PIPES AND WIRES, POSTMASTER-  
GENERAL, and LEAKAGE AND ELECTROLYSIS.

**PLAN.** *See also* MAP.

where undertakers propose to break up streets for laying pipes, etc.,  
225.

particulars which such plan must show, 169 *n.*, 225 *n.*

section of Act of 1899—

requiring notice of works with plan to be served on Postmaster-  
General and local authority, 168.

as to notice of works with plan in the case of streets not repairable  
by a local authority, 170.

in the case of railways, tramways, and canals, 170.

as to notice of works with plan where undertakers seek to alter  
position of pipes or wires, etc., which interfere with the exercise  
of powers, 175.

definition of, in Act of 1899...157.

finer on undertakers for not having constructed according to plan,  
226 *n.*

and map of underground tube railway works, 423.

of mode of construction of tramways to be laid before Board of Trade,  
391.

requirements of Board of Trade as to, 391, 392.

**PLANT,**

report of Lord Cross's committee as to liability of a company's rolling  
stock and, to distress, 61.

## POSTMASTER-GENERAL,

Electric Lighting Act, 1882—

various provisions in s. 26...123.

incorporated provisions of Telegraph Acts, 124 *et seq.*

s. 35 as to saving for privileges of, 134.

decision in *Attorney-General v. Edison Telephone Co.*, 92 n.

Electric Lighting (Clauses) Act, 1899—

plan of works to be served on (s. 14), 168.

protection of telegraphic and telephonic wires (s. 20), 179.

saving for (s. 79), 208.

Tube and other Railways authorised to be worked by electrical power—  
these Acts contain clauses for the protection of, 404 *et seq.*

Power Acts—

these incorporate, *inter alia*, the provisions of the 1882 Act  
relating to, and also sects. 14, 20 and 79 of the schedule to  
the Electric Lighting (Clauses) Act, 1899...438, 441, 443.agreement between, and electric lighting company as to use of trenches,  
tubes, pipes, etc., of the company, 103 n.saving of rights of, under Public Health Acts Amendment Act, 1890,  
97 n.telegraph line of, not to be injuriously affected, 123 *et seq.*, 179.provisions where undertakers propose to lay electric line within ten  
yards of a telegraphic line of, 123.

legal proceedings by, enactment as to, 128.

cases as to privileges of, and National Telephone Co. in connection  
with breaking up streets, 217—221.differences between, and undertakers to be determined by arbitration,  
123.

liability of undertakers to fines, 123.

saving in the case of a work of emergency, 123.

provision in Telegraph Act, 1878, as to work done in pursuance of  
special Acts which involve alteration in telegraphic line, 125.POWER. *See also* POWER ACTS.

definition of, in Act of 1899...155.

limit of, in high pressure electric line, 246, 264.

report of Lord Cross's committee as to schemes for supplying energy to  
other undertakers and not directly to consumers, 59.*See* MAXIMUM POWER.

## POWER ACTS,

first introduced in Session of 1900...433.

committees presided over by Sir James Kitson and Sir Alexander  
Hargreaves Brown respectively, 433.

proceedings before Sir James Kitson's committee, 435.

various provisions contained in, 436 *et seq.*

how far Power Companies may supply energy for lighting purposes, 436.

Model Clause as to electrolytic action not inserted in, 438.

how far they incorporate Electric Lighting Act, 1882...438.

1888...439.

the schedule to the Electric Lighting (Clauses)  
Act, 1899...440 *et seq.*

list of, passed down to end of 1902...434—435.

**POWER ACTS**—*continued*.

provisions in, in regard to nuisance, 443. *See* NUISANCE.  
land, 444.

summary of various provisions contained in, 443—447.

Loch Leven Water Power Act, 1901...447.

restrictions of s. 13 of 1882 Act and s. 12 of schedule to 1899 Act not to  
apply to power companies as regards railways and tramways on  
level, 109, 165, 441.

consent of rural district council not to be unreasonably withheld to over-  
head wires, 111, 164, 439.

powers of Board of Trade, 111, 164, 439.

railways and tramways crossing highways on level, special powers as  
to, 109, 165, 441.

capital and borrowing powers, 444, 445.

agreement as to water supply, 446.

power to lay water pipes, 446.

compensation for damage, 446.

**PREFERENCE,**

no undue preference allowed, 24, 117.

**PRESSURE,**

definition of, in Board of Trade regulations, 243, 261.

of supply to consumers, 244, 262.

transforming apparatus, 244.

constant, 255, 259.

limitations of extra-high, 244.

high, conductors to be covered, 246, 263.

testing of insulation of all parts at any high pressure circuit, 246, 264.

quick-acting cut-off for high, lines, 246, 264.

limit of power in high, electric lines, 246, 264.

discharge of, from high pressure aerial line, in case of fire, 248, 266.

in mains during supply, 254.

fixing of standard, 255, 259.

alteration of, with consent of local authority with appeal to Board  
of Trade, 255, 259.

declared, at consumer's terminals, 255, 259.

variation of, at consumer's terminals, 256.

**PRICE.** *And see* CUTTING OFF SUPPLY OF ENERGY and RECOVERY OF CHARGES.

or rent due for electricity to be recovered as a civil debt, 37, 107, 108, 229,  
230.

methods of charging, 35, 36, 189, 234.

usual provisions contained in provisional orders as to, 117 n., 234.

maximum prices, 35, 189, 234.

Board of Trade unit defined, 234.

revision of maximum prices and methods of charge every seven years,  
37, 189.

county of London orders, 190 n.

to public lamps, where undertaking in hands of company, etc., 190.

under Power Acts, 445.

revision of, 446.

**PRINCIPAL ACT,**

- meaning of, in Electric Lighting (Scotland) Act, 1890...151.
- in Electric Lighting (Clauses) Act, 1899...155.

**PRINTING,**

- draft of provisional order required to be deposited with Board of Trade must be printed, 237.
- of notices under Telegraph Act, 1878...128.
- notices under Act of 1899 may be partly or wholly in, 200.

**PRIVATE LAND, STREETS, ETC.,**

- Electric Lighting Act, 1882,
  - restriction on breaking up of street, etc., not repairable by local authority, 108.
    - special authority in provisional orders, 232, 233.
    - consent of Board of Trade in the case of a street not repairable by local authority, 108.
    - definition of "street," 133.
- Electric Lighting (Clauses) Act, 1899.
  - restriction on breaking up of street, etc., not repairable by local authority, 170.
    - the authority to break up is contained in the provisional order, 232, 233.
  - railways and tramways, 170, 232, 233.
- Gasworks Clauses Act, 1847—
  - undertakers not to enter on private land without consent, 223.
- right of entry on premises,
  - power of undertakers to enter premises supplied, 38, 121.
  - supplying meters, 197.

**PRIVATE PURPOSES,**

- definition of, 89.
- conditions under which undertakers may be compelled to supply electricity for, 24, 116, 185.
- See SUPPLY.*

**PROFITS,**

- no provisions limiting, 37.
- revision of prices and method of charge every seven years, 36, 37, 189.
- of power companies, generally limited to 8 per cent., 445.
  - under Cornwall Act 10 per cent., 445 *n.*
- revision of, by Board of Trade, 446.

**PROHIBITION,**

- of supply beyond area, 13, 158.
- overhead wires, 30, 109, 163.
- See further, OVERHEAD WIRES.*

**PROTECTION,**

- of local authorities, under Public Authorities' Protection Act, 1893...50, 163.
- of local authorities, their members, officers, etc., from personal liability, under Public Health Act, 1875, and Electric Lighting Act, 1882... 60, 163.
- of mines, 134, 222 *n.*

**PROTECTION**—*continued*.

- of canals and of persons constructing docks, basins, or other works adjoining canals, 38, 114, 170, 179.
- insulating material, 245, 263.
- every high pressure electric line conductor or other apparatus by a suitable automatic quick-acting cut-off, 246, 264.
- consumers' wires by some suitable automatic and quick-acting means, where high pressure supply transformed, 246, 264.
- from lightning, 246, 264.
- of service line, by fuses in a street box, 251, 269.
- electric lines so as to prevent possibility of electrical discharge to any adjacent metallic substance, 251, 269.
- telegraphic wires, etc., of Postmaster-General. *See* POSTMASTER-GENERAL.
- sewers, gas or water pipes, or other electric lines, 177.
- railway or canal companies, 179.
- telegraphic and telephonic wires, 179.
- the rights of the Crown in the foreshore, 208.

**PROVISIONAL ORDER,**

- Board of Trade authorised to grant, 92.
- application for, must be made by memorial, 236.
- local authority intending to apply for, must first pass special resolution after a month's notice, 90, 93.
- special notice on or before July 1st, to local authority of proposed area, 93.
- local authority applying for, have a preference, 91 *n.*, 241.
- local inquiry, 9, 91 *n.*, 242.
- copies of draft, to be kept for sale, 237.
- licence or, when made, to be kept for sale, 237.
- consent of local authority required under Act of 1888...6, 144.
- power of Board of Trade to dispense with such consent, 6, 144.
- instances in which consent dispensed with, 74 *et seq.*
- granting of, confers no monopoly, 12, 144.
- requires confirmation by Parliament, 93.
- confirmation may be opposed, 93, 240.
- proceedings after order or licence granted, 9, 240.
- dates and periods to be observed in application for, 10.
- special notice in writing to every authority, company, or person, authorised to supply electricity in area, 236.
- public advertisements during October and November, 241.
- deposit of copy of public advertisement with Board of Trade, 241.
- when memorial must be lodged, 10, 236.
- shall not be granted by Board of Trade until expiration of three months from first publication of advertisement, 10, 89, 93.
- objectors entitled to be heard, 93, 240.
- " clauses or other amendments " to be delivered to Board of Trade, 240.
- compliance must be proved with Board of Trade rules, 241.
- repeal or amendment of, 7, 93.
- Board of Trade rules regarding application for, 235.
- consent of local authorities, 235.

**PROVISIONAL ORDER—continued.**

- Board of Trade rules regarding application for—*continued*.
  - notices, 236.
  - application and deposits, 236.
  - draft of, to be deposited with Board of Trade, 237.
  - various deposits to be made with Board of Trade, 238.
  - procedure, 239.
  - special provisions regarding, 241.
- regulations to be inserted regarding limits, regular supply, safety of public, price, inspection and inquiry, 95.
- further regulations to be made by Board of Trade from time to time regarding safety of the public, and ensuring a proper and sufficient supply of energy, 96.
- regulations of the Board of Trade now in use, 243.
- purchase by local authority of undertaking authorised by, 129, 145.
  - terms and conditions of, 145.
  - county of London orders, 147 *n*.
  - See* LONDON, COUNTY OF.
  - power to vary terms of sale, 146—147.
- form of, 231.
- points in which County of London, differs from provincial, 303.
- under Tramways Act, 1870—
  - consent of local authority necessary, 374.
  - policy of requiring consent, 375.
  - no compulsory power to take land, 374.
  - electrical traction, 376.
  - Model Clause as to use of electrical power inserted in, 376.
  - Board of Trade regulations, 377, 381, 383, 388, 392.
    - overhead trolley system, 377.
    - surface contact system, 381, 388.
    - underground conduit system, 383, 388.
    - as to electrolytic action under Motive Power Clause, 383.
  - some special provisions contained in Tramway Acts, 390, 391.

**PUBLICATION,**

- of advertisement for licence or order, 7, 89 *et seq*.
- Board of Trade rules requiring public advertisements, 239, 241.
- of draft provisional order and sale of copies to public, 240.
  - order or licence when made, and sale of copies, 240.
- Board of Trade regulations, and sale of copies, 205.
- See further, SALE.*

**PUBLIC AUTHORITIES' PROTECTION ACT, 1893.**

- provisions of, 50, 163 *n*.
- See further, PROTECTION.*

**PUBLIC HEALTH ACTS,**

- Public Health Act, 1875...97 *n*., 98 *n*., 135, 138, 163, 213.
- Public Health Act, 1875 (Support of Sewers), Amendment Act, 1883, 222 *n*.
- Public Health Acts Amendment Act, 1890...97 *n*., 113 *n*., 150 *n*., 271.
- Public Health (London) Act, 1891...163 *n*., 209, 304.

**PUBLIC HEALTH ACTS—continued.**

Public Health (Scotland) Act, 1867...141.

Public Health (Scotland) Act, 1897...124 n., 141.

Public Health (Ireland) Act, 1878...135, 142, 143.

**PUBLIC HEALTH ACTS AMENDMENT ACT, 1890,**

bye-laws by local authority under, where Act adopted, 97 n., 113 n.,  
150 n., 271.

**PUBLIC LAMPS,**

conditions entitling local authority to demand a supply of energy to,  
26, 187.

price of supply to, to be settled by arbitration if not agreed, 190.

**PUBLIC PURPOSES,**

definition of, 89.

conditions under which local authority may demand a supply for, 26, 187.

**PURCHASE,**

by local authority from company of undertaking; provisions regarding,  
34, 129, 145, 202.

terms of sale may be varied by provisional order, 146.

instances of such variation, 34, 147 n.

recommendation by Lord Cross's committee of 1898 that "local  
authorities should be empowered to purchase undertakings partly  
outside their area of supply," 61.

by local authority from company of undertaking where order has been  
revoked, 202.

by company of undertaking of local authority, 105 n.

report of Lord Cross's committee on the question of compulsory, 59.

instances where compulsory power to purchase land conferred by  
Act, 61—70.

of land by agreement, 18, 101, 107.

*See further, LAND.*

by companies not limited as to quantity, 101.

local authorities limited, 102.

London orders, 35, 147, 304.

question of sliding scale, where exemption from liability to purchase, 60.

by local authority of undertaking of non-statutory company, 9, 112 n.

*See further, TRANSFER.*

**Q.****QUANTIFY,**

amount of energy supplied to consumer must be ascertained by meter  
unless otherwise agreed, 196.

*See further, METER and LAND.*

**R.****RAILWAY,**

restriction on breaking up of, under Electric Lighting Acts, 108, 165, 170.

restrictions under s. 13 of 1882 Act and s. 12 of schedule to 1899 Act

not to apply to Power Acts as regards railways or tramways on  
level, 109, 165, 439, 441.

definition of, in Act of 1899...156.

**RAILWAY**—*continued*.

- execution by undertakers of works over or under any, 170.
- notice to be given in such case with plan, 170.
- requisition by, arbitration, etc., 170.
- execution by undertakers of works near, 179.
- tunnels, arches, works, or conveniences belonging to, not to be injured, 179.
- Railways Clauses Consolidation Act, 1845...108 *n*.
- See PENALTIES and SUMMARY JURISDICTION.
- Railways Construction Facilities Act, 1864...124, 131.
- Light Railways Act, 1896...124.
- tube and other railways authorised to be worked by electrical power, 403.
  - list of such companies, 403.
  - some particulars of the various Acts authorising, 404 *et seq*.
  - power to take land compulsorily, and no clause as to nuisance, 408 *et seq*.
  - some special clauses as to taking "reasonable care to prevent nuisance by vibration," 406, 407, 409, 412.
  - model clause as to use of electrical power generally inserted, 404 *et seq*.
  - special clause in Manchester and Liverpool Electric Express Railway Act, 1901...415.
  - powers generally conferred by Tube Railway Acts, 418.
    - easements and public streets, 418.
    - taking of lands and interests therein, 418.
    - clause as to compensation for damage by working (inserted in Session 1902), 420.
    - provisions as to mode of construction, 420.
      - double tunnels, 420.
      - approaches and shafts, 420, 421.
      - stations and diameter of tubes, 421.
      - trial borings, 421.
      - grouting, 421.
      - air-compressing machinery, 421.
      - pumping water, 422.
      - motive power, 422.
      - lands for generating station, etc., 422.
      - protective clauses, 423.
      - map and plan of underground works, 423.
      - power to hold patent rights, 423.
      - power to divide shares, 423.
  - evidence of Col. H. A. Yorke, R.E. (Session 1902) as to various points in connection with tube railways, 424.
    - clause proposed and accepted giving larger powers to Board of Trade with respect to permanent way, rolling stock, lighting, ventilation, etc., 425.
    - form of this clause as inserted in Great Northern and Strand Railway Act, 1902...426 *n*.
  - joint committee (Electric and Cable Railways) (Metropolis), 1892...426.
    - report of, 426, 427.
  - joint committee London Underground Railways, 1901...427.
    - report of, 428.



**RAILWAY**—*continued.*

tube and other railways authorised to be worked, etc.—*continued.*

Central London Railway (Vibration) Committee, 1901—

appointed by the Board of Trade, 428.

Lord Rayleigh, chairman, 428.

their report, 428, 429.

regulations made by the Board of Trade, 430 *et seq.*

shallow tunnels, report of joint committee of 1901 as to, 429.

Chemin de Fer Métropolitain de Paris, report of Col. Yorke to Board of Trade as to, 429.

Rapid Transit Subway, New York, report to London County Council as to, 429.

London County Council subway from Southampton Row to Thames Embankment with electric tramway therein, 430.

**“REASONABLE EXPENSES”**

of an electric inspector, what are, 195.

**RECOVERY OF CHARGES,**

for energy, etc., as a civil debt in court of summary jurisdiction, 37,  
107, 108 *n.*, 229, 230.

by action in court of competent jurisdiction, 230.

undertakers authorised to cut off supply in certain cases, 120. *See*  
CUTTING OFF SUPPLY OF ENERGY.

**REGULATIONS,**

required by Act of 1882, s. 6, to be inserted in licences or orders,  
relating to limits, supply, safety of public, price, etc., 14, 95.

further regulations from time to time to be made and altered by Board  
of Trade, 14, 96.

form of regulations now in use, 243, 261.

conference with Board of Trade to settle form of, 14.

a model form only, which may be altered in details to suit particular  
cases, 15.

to be printed by undertakers, and copies kept for sale, 205.

penalty for default, 205.

definition of, in Act of 1899...156.

under Act of 1888, s. 4, with regard to works existing otherwise than  
under any licence, order, or special Act, 147.

form of regulations in use under that section, 261.

standard pressure and alteration of, 255, 259.

*See further, BOARD OF TRADE REGULATIONS.*

**REINSTATEMENT.** *See STREET.***REMEDYING OF SYSTEM AND WORKS,**

on representation to Board of Trade, 23, 205.

where system in use is not approved by Board of Trade, 23, 205.

any part of circuits connected with earth, 23, 205.

electric line placed above-ground, 23, 205.

electric lines or works defective and not in accordance with Board  
of Trade regulations, 23, 205.

any work is attended with danger to public safety, 23, 205.

or affects telegraphic line of Postmaster-General, etc., 23,  
205.

**RENT.** *See* **PRICE.**

recovery of, or charge due for electricity, 37, 107, 108 n., 229, 230.

**REPORT,**

annual, to be made by Board of Trade, 5, 182.

of accident by explosion or fire, etc., to be made by undertakers to Board of Trade, 49, 54, 192.

*See further, ACCIDENTS.*

Board of Trade may hold inquiry, 192.

by electric inspector of results of testing of undertakers' instruments, 195.

**REQUISITION,**

by owners and occupiers requiring supply of energy, 24, 181.

proceedings thereupon, 181.

manner in which requisition is to be made, 183.

by a local authority, 185.

railway company for arbitration, 170.

**RESTRICTIONS,**

on breaking up of private streets, railways, tramways, etc. *See* **PRIVATE LAND, STREETS, ETC.**

as to above-ground works, 30, 109. *See* **ABOVE-GROUND WORKS.**

on electric lines or works existing without licence, order, or special Act, 147, 261.

under s. 13 of 1882 Act and s. 12 of schedule to 1899 Act not to apply to Power Acts as regards railways or tramways on level, 109, 165, 441.

**REVENUE.** *See* **LOCAL AUTHORITY** and **APPLICATION.****REVISION,**

of charges and methods of supply every seven years, 37, 189.

**REVOCATION,**

of provisional order by Board of Trade—

generally, 45.

if (without authority) undertakers purchase or acquire or associate themselves with any other company, etc., supplying energy, 45, 157.

undertakers supply energy or lay down lines or works beyond area of supply, 45, 158.

fail to show they are in a position to discharge duties, etc., or to make deposit or give required security, 45, 159.

lay down distributing mains within periods prescribed, 45, 182.

are insolvent, 45, 201.

undertaking cannot be carried on with profit, 45, 201.

local authority undertakers and works are not executed, 45, 202.

by consent, 45, 202.

if undertakers fail to comply with order of Board of Trade to abate or discontinue supplying otherwise than by means of a system approved, 45, 205.

illegal continuance of works above-ground, or danger to public, etc., 45, 205.

power of local authority to purchase undertaking of company when order of company revoked, 202.

REVOCATION—*continued.*

provisions where order in favour of local authority revoked, 204.  
Power Acts, how they deal with, 442.

RIVERS,

list of navigable, in proposed area of supply, to be deposited, 238.  
cables or other works in or across bed or foreshore of, 170 n.

ROADS,

list of, not repairable by local authority, to be deposited, 238.  
power and conditions of laying lines and works in, when not repairable  
by local authority, 172.  
*See further, STREET.*

ROLLING STOCK,

report of Lord Cross's committee as to the plant and, of a company being  
liable to distress, 61.

RULES

of Board of Trade. *See* BOARD OF TRADE RULES.

RURAL DISTRICT COUNCIL,

provision in Power Acts that consent of, should not be unreasonably  
withheld, 111, 164, 439.  
powers of Board of Trade, 111, 164, 439.

S.

SAFETY,

Board of Trade authorised to make regulations for safety of public,  
13, 95.

form of regulations so made, 243.

amendment and repeal from time to time, 96.

local authority authorised to make bye-laws for safety of public, 96.

none such made, 96 n.

under Public Health Acts Amendment Act, 1890...97 n., 271.

restrictions as to above-ground works. *See* ABOVE-GROUND WORKS.

remedying of system and works where work of undertakers attended  
with danger to public, 23, 205.

high pressure electric line not to be used for transmission of more than  
300,000 Watts, unless with consent in writing of Board of Trade,  
246.

in the case of an aerial line 50,000 Watts, 246.

regulations under Act of 1888, s. 4, 100,000 and 50,000 Watts,  
respectively, 264.

*See further, ABOVE-GROUND WORKS; BOARD OF TRADE REGU-  
LATIONS; and OVERHEAD WIRES.*

SALE. *See* PURCHASE.

of copies of accounts of undertakers, 100.

draft provisional order, 237.

provisional order or licence when made, 240.

Board of Trade Regulations, 205.

**SARDINIA STREET CASE,**

- taking of generating station of Metropolitan Electric Supply Co. by London County Council, 104.
- condition as to reinstatement, 104.
- decision of the House of Lords as to the principle on which compensation is to be assessed, 104, 105.

**SAVING RIGHTS,**

- under Public Health Acts Amendment Act, 1890...97 *n.*
- of Postmaster-General. *See* POSTMASTER-GENERAL.
- Crown in foreshore, 208.

**SCOTLAND,**

- application of Act of 1882 to, 135.
- repeal by Act of 1890, of schedule relating to, in Act of 1882...151.
- the new schedule applicable to, 140.
- local authorities in, 140, 141.
- delegation by certain local authorities in, 151.
- local authorities in, may borrow for the purpose of electric lighting, 98, 140, 141, 153.
- Act of 1902 enacts no limit on borrowing powers but repayment within thirty years, 153.
- Secretary for Scotland, consent necessary to borrowing by local authority in, 141.
- audit of accounts in, 141.
- recovery of price, etc., as a "civil debt" under Act of 1899...210.
- sheriff. *See* SHERIFF and SUMMARY JURISDICTION.
- Land Clauses Consolidation (Scotland) Act, 1845...135.
- Railways Clauses Consolidation (Scotland) Act, 1845...108 *n.*
- General Police and Improvement (Scotland) Act, 1862...141.
- Public Health (Scotland) Act, 1867...141.
- Burghs Gas Supply (Scotland) Act, 1876...140.
- Local Government (Scotland) Act, 1889...141.
- Electric Lighting (Scotland) Act, 1890...140, 151.
- 1902...153.
- Burgh Police (Scotland) Act, 1892...140, 141.
- Burghs Gas Supply (Scotland) Act, 1893...140.
- Public Health (Scotland) Act, 1897...124, 141.
- Private Legislation Procedure (Scotland) Act, 1899—
  - power of Board of Trade to make provisional orders under the Electric Lighting Acts preserved, 62 & 63 Vict. c. 47, s. 16 (2).
- Town Councils (Scotland) Act, 1900...140 *n.*, 141 *n.*

**SECRETARY FOR SCOTLAND. *See* SCOTLAND.****SECURITY,**

- on which loans may be contracted by local authorities, 137, 139, 141, 143.
- for execution of works, 49, 159.
- not required from local authorities, 159.
- nature and amount of, by deposit or otherwise, 206.
- court of summary jurisdiction may determine, 206.
- of public from injury by shock, fire, or otherwise. *See* BOARD OF TRADE REGULATIONS and SAFETY.

**SECURITY—continued.**

may be required from consumer before giving or after commencing to give supply, 186.

*See* CONSUMER.

for meter supplied by undertakers, 197.

**SEPARATE SUPPLY,**

special clause as to supply to a consumer who has a, 184 *n*.

**SERVICE LINES,**

from aerial lines, 247, 266.

protection of consumers' wires by some suitable automatic and quick-acting means, where high pressure supply transformed, 246, 264.

protection of, by fuse in a street box, 251, 269.

definition of, in Act of 1899...155.

restriction on the placing of electric lines other than, near sewers or water pipes or other electric lines, 177.

street boxes to be used by undertakers only for the purpose of leading off, 166.

**SETTLED LAND ACTS,**

cases decided under, in connection with electric lighting installation, 54—55.

**SEWERS,**

not to be opened, etc., except under superintendence, 225.

undertakers not authorised to alter position of, 174.

provisions regulating the laying of electric lines, etc., near, 177.

commissioners of, in London, merged in City Corporation, 32, 103, 326 *n*.

**SHALLOW TUNNELS,**

report of joint committee of 1901 as to, 429.

Chemin de Fer Métropolitain de Paris, report of Col. Yorke, 429.

New York Rapid Transit Subway, 429.

*See further,* SUBWAYS.

**SHARE,**

provision of Tube Acts as to dividing each, into two half-shares, 423.

Power Acts as to same, 444.

**SITE OF WORKS. *See* GENERATING STATION.****SLIDING SCALE,**

report of Lord Cross's committee as to expediency of, where exemption from liability to purchase, 60.

**SLOT METERS. *See* COIN METERS.****SMOKE, BLACK,**

provision of Public Health (London) Act, 1891, as to, 209 *n*.

cases with regard to convictions for, 209 *n*.

**SOUTH METROPOLITAN GAS CO.,**

clause inserted on opposition of, to prevent certain Metropolitan local authorities from paying deficit on electrical undertaking out of rates, 73.

**SPECIAL ORDER,**

definition of, in Act of 1899...155.

**STAMP DUTY,**

- on instrument whereby *inter alia* a supply of electricity was part of the consideration, 104 *n*.
- on purchase of undertaking where part of price was in consideration of goods, wares and merchandise, 146 *n*.

**STANDARD PRESSURE,**

- provided for, in Board of Trade regulations, 255, 259.

**STANDING ORDERS,**

- relating to acquisition of houses of the labouring classes—  
     clauses inserted in consequence of, 162.
- as to description in notice and Bill of generating stations (where procedure is by Bill), 102 *n*.

**STEALING,**

- electricity, 121.

**STEAM ROLLERS,**

- injury to gas and water pipes, etc., by, 222 *n*.
- See also* TRACTION ENGINE.

**STREET,**

- definition of, in Act of 1882...133.
- restriction on breaking up private. *See* PRIVATE LAND, STREETS, ETC.
- Board of Trade rules as to streets in which electric lines to be laid, 238, 239.
- breaking up of. *See* BREAKING UP STREETS.
- how far subsoil of, vested in road authority, 215 *n*.
- instance of fee simple in road authority, 217 *n*.
- arches, etc., under carriage way, 216 *n*.
- cases as to privileges of Postmaster-General and National Telephone Co., 217—221.
- construction of street boxes, 165, 166.
- laying of electric mains and works in public streets or bridges, 168.  
     lines and works in streets not repairable by local  
     authority, or near railway, tramway, or canal, 170.
- authority may exercise power of undertakers to break up, 172.
- alteration of pipes, wires, etc., under, which interfere with exercise of  
     undertakers' powers, 174.
- laying of electric lines, etc., near sewers, or gas, or water pipes, or other  
     electric lines, 177.
- subways in metropolis. *See* SUBWAYS.
- report of Lord Cross's committee on the subject of generating stations,  
     outside the area of supply, 58.
- report of Lord Cross's committee on the subject of laying of lines in  
     streets outside area of supply, 58.

**STREET BOXES,**

- special section in Act of 1899 regarding, 165, 166.
- cases relating to the construction of, and transforming stations, 167.
- exclusive use and sole control of undertakers, 166.
- materials of, 166.
- local authority with approval of Board of Trade may prescribe hours of  
     access, 166.

**STREET BOXES—continued.**

- penalty on undertakers, 166.
- saving for cases of emergency, 166.
- regulation of Board of Trade regarding, 250, 268.
- covers to be secured, 250, 268.
- means must be taken to render it impossible that covers, etc., shall become electrically charged, 250, 268.
- where street boxes used as transformer chambers, 250, 268.
- must be regularly inspected for presence of gas, 250, 268.
- held to be within London Building Act, 1894...166, 167.

**SUBWAYS,**

- constructed under Metropolitan Subways Act, 1868...222, 303.
- London County Council (Subways) Act, 1893...222.
- special clauses inserted in county of London orders as to use of, for electric lines, 303.
- arbitration to fix rent for use of, 42, 303.
- or shallow tunnels immediately under the surface of roadways, 429.
- report of joint committee of 1901 as to, 429.
- Chemin de Fer Métropolitain de Paris, 429.
- New York Rapid Transit Subway, 429.
- London County Council Subway under Strand Improvement Act, 1899, 430.
- from Southampton Row to Thames Embankment, 430.
- electric tramway authorised therein, 430.

**SUMMARY JURISDICTION,**

- recovery of civil debts in court of, 230 *n.* See CIVIL DEBT.
- mode of enforcing order of a court of, 113 *n.*
- recovery of penalties, 230 *n.*
- Summary Jurisdiction Act, 1848...108 *n.*
- 1879...108 *n.*
- 1884...108 *n.*
- recovery of remuneration of auditor of company's accounts, as a civil debt, 160.
- when court of, may abate rigour of penalties provided, 166, 169, 171, 173, 177, 178, 180.
- recovery of expenses under section authorising street authority to exercise powers of the undertakers to break up, 173.
- as a civil debt of expenses incurred by undertakers on alteration by consumer of his maximum power, 187.
- fees and reasonable expenses of electric inspector, when to be ascertained by a court of, 195.
- recovery of expenses of providing new meters where method of charge altered, as a civil debt, 199.
- determination of amount of security by way of deposit or otherwise, 206.
- recovery and application of penalties as provided by Summary Jurisdiction Acts, 207.
- sheriff, in Scotland, exercises power of, 210.
- See PENALTIES.

**SUMMONS OR WARRANT,**

several names may be included, 230.

**SUNDAY,**

when not to be reckoned in computation of number of days, 201.

**SUPPLY,**

consumer may demand a, 24, 116, 185.

conditions under which such demand may be made, 25, 116, 185.

no undue preference, 24, 117.

no special form of lamp or burner to be prescribed, 30, 115.

Board of Trade regulations for securing proper and sufficient, 95, 244.

when, may be cut off. *See* CUTTING OFF SUPPLY OF ENERGY.

to public lamps, conditions under which local authority may demand,  
26, 187.

beyond area of supply, prohibited, 168.

*See further, AREA OF SUPPLY.*

undertakers not responsible for interruption of, caused by electric inspection and testing, 193.

to consumer who has a separate supply, 72, 184 *n.*

**SUPPORT, RIGHT OF,**

for gas and water pipes, etc., 221, 222.

right to work mines saved under the Act of 1882...134, 221 *n.*, 222 *n.*

*See further, MINES AND MINERALS.*

**SUPPORTS,**

maximum intervals between, of aerial lines, 247, 265.

construction and erection of supports, 247, 265.

attachment of aerial lines to, 247, 266.

**SURFACE CONTACT SYSTEM. *See under* TRAMWAY.****SUSPENDING WIRES,**

special provisions regarding, in the case of high pressure aerial lines,  
248, 266.

**SYSTEM OF SUPPLY,**

to be approved by Board of Trade, 23, 163.

remedying of, on representation of Board of Trade, 23, 205.

where system in use is not approved by Board, 23, 205.

any part of system is connected with earth, 23, 205.

any electric line placed above ground, 23, 205.

electric lines or works not in accordance with regulations, 23, 205.

any work is attended with danger to public, 23, 205.

affects telegraphic line of Postmaster-General, 23, 205.

**T.****TELEGRAM,**

definition of, in Telegraph Act, 1869...91.

Act of 1882...133.

*See further, TELEPHONE.*



**TELEGRAPH,**

definition of, in Telegraph Acts, 1863 and 1869...91.

protection of telegraphic wires, etc., of Postmaster-General, 123, 179,  
208.

*See further, POSTMASTER-GENERAL.*

**TELEGRAPHIC OR TELEPHONIC WIRES,**

definition of "telegraphic line" in Act of 1869...156.

protection of, from injury by induction or otherwise, 179.

*See further, POSTMASTER-GENERAL.*

**TELEPHONE,**

within the definition of "telegraph" in Telegraph Acts, 1863 and  
1869...91.

*Attorney-General v. Edison Telephone Co., 92.*

**TENANT,**

incoming, not responsible for arrears, 229.

may be required to enter into a written contract, 116 n., 185.

security may be required before giving, or after commencing to give  
supply, 186.

position of a manager and receiver, 120 n.

**TESTING AND INSPECTION,**

every main to be tested for insulation before use, 245, 263.

circuit to be tested for insulation at least once each week, 245,  
263.

of all parts of any high pressure circuit, 246, 264.

appointment of electric inspector, 27, 190.

duties of, 191.

remuneration of, 191.

inquiry into accidents, 192.

testing of mains, 193.

works and supply on consumers' premises, 193.

stations, 193.

undertakers to keep instruments on premises, 194.

readings of instruments, 194.

testing undertakers' instruments, 194.

representation of undertakers at testings, 195.

facilities for testing to be given by undertakers, 195.

report of results of testing, 195.

expenses of electric inspector, 195.

establishment of testing stations by London County Council, 312.

rules prescribed, 312.

**THEATRE,**

lighting of, within "public purposes," 89.

power of London County Council to make regulations with regard to  
protection of, from fire, 315.

regulations so made, 316.

**TIMES. *See also* DAYS and HOUR.**

dates and periods to be observed in applications to Board of Trade for  
licences or orders, 10, 11.

**TRACTION, ELECTRIC,**

- overhead wires for, report of Lord Cross's committee as to consent of local authority, 58.
- supply of electricity by local authority for, to tramway, etc., partly within and partly without limits, 72.
- tramways and light railways authorised to be worked by, 374.
- See further, under* TRAMWAY and LIGHT RAILWAYS ACT, 1896.

**TRACTION ENGINE,**

- injury by, to gas and water pipes, 222 n.
- See also* STREAM ROLLERS.

**TRAMWAY,**

- restrictions on breaking up of, 108, 109 n., 165, 439, 441.
- restrictions under s. 13 of 1882 Act and s. 12 of schedule to Act of 1899 not to apply to Power Acts as regards railways or tramways on level, 109, 165, 439, 441.
- definition of, in Act of 1899...156.
- execution by undertakers of works over or under any, 170.
  - notice to be given in such case with plan, 170.
  - requisition, arbitration, etc., 170—172.
- return to Board of Trade of accidents, 400—402.
- electric feeders under footway to tramways, 214.
- pole and fuse-box of tramway in footway, 214.
- under Tramways Act, 1870, land cannot be taken compulsorily, 374.
  - no right to break up footway, 221 n.
- chapter on tramways and light railways worked by electrical power, 374.
  - consent of local authority, 374.
  - land, 374.
  - Light Railways Act, 375.
  - policy of requiring consent of local authority, 375.
  - provisions as to motive power, 376.
  - model clause as to electrolytic action, 376.
  - Board of Trade regulations, 377, 381, 383, 388, 392.
    - overhead trolley system, 377.
    - surface contact system, 381, 388.
    - underground conduit system, 383, 388.
  - attachment of brackets to buildings, 390.
  - plan of mode of construction, etc., to be laid before Board of Trade, 391.
  - bye-laws, 390.
  - guard wires on electric tramways, 392.
- chapter on tube and other railways authorised to be worked by electrical power, 403.
  - See further under* RAILWAY.
  - subways or shallow tunnels immediately under the surface of the roadways, 429.
  - report of joint committee of 1901 as to, 429.
  - Chemin de Fer Métropolitain de Paris, report of Col. Yorke, R.E., 429.

**TRAMWAY**—*continued*.

chapter on tube and other railways, etc.—*continued*.

New York Rapid Transit Subway, 429.

London County Council shallow subway from Theobald's Road to Victoria Embankment, with electric tramway therein, 430.

**TRANSFER,**

of undertaking from company to local authority, 34, 129, 145, 202, 203.

a local authority to a company, restriction on, 105 *n*.  
not now favoured by the Board of Trade, 105 *n*.

recent instances of such transfers  
being sanctioned by provisional  
order, 105 *n*.

question put in House of Commons  
as to, 106 *n*.

company to a local authority where order has  
been revoked, 202, 203.

report of Lord Cross's committee regarding, 59.

**TRANSFORMER,**

different systems of supply, 22.

pressure of supply to a transforming station, or to transforming  
apparatus on consumer's premises, 244.

to be provided where high pressure supply, 246, 264.

with quick-acting cut-off, 246, 264.

provisions where street boxes are used as transformer chambers, 250, 268.  
cases regarding, 166, 167.

to be established in suitable places, where system is high pressure, 250, 269.

to be in sole occupation and charge of the undertakers, 250, 269.

on consumer's premises, to be enclosed in solid walls or metal casing  
efficiently connected with earth, 251, 269.

*See further*, STREET BOXES.

**TUBE AND OTHER RAILWAYS WORKED BY ELECTRICITY.** *See*  
RAILWAY.**TUNNELS,**

undertakers not to injure tunnels, etc., of railways, 179.

*See further*, RAILWAY.

**U.****UNDERGROUND CONDUIT SYSTEM.** *See under* TRAMWAY.**UNDERTAKERS,**

who may be, under Electric Lighting Acts, 1882—1890...89, 92, 93.

local authorities, companies, or persons, 89, 92, 93.

proceedings to obtain provisional order. *See* PROVISIONAL ORDER.

sale of undertaking by. *See* PURCHASE and SALE.

obligation to supply. *See* SUPPLY.

revocation of provisional order. *See* REVOCATION.

penalties for failures or defaults. *See* PENALTIES.

**UNDUE PREFERENCE,**

undertakers not to show, 24, 117.

**UNIT,**

of Board of Trade, definition of, 52, 234.

**USE,**

of any special form of lamp or burner not to be prescribed by undertakers, 30, 115.

electricity by consumer, undertakers not to interfere with manner of, 30, 115.

consumer not to use any lamp or burner so as to unduly or improperly interfere with supply to others, 30, 115.

of electricity by consumer, so as to unduly or improperly interfere, etc., 30, 115.

**V.****VALUE,**

of undertaking when purchased by local authority, how to be ascertained, 129, 145, 202, 203.

in County of London Orders, 60, 147, 304.

*See further, PURCHASE.*

supply of energy afforded. *See PRICE.*

**VARYING,**

terms of sale of a company's undertaking to a local authority, provisional order may provide for, 146.

of price and method of supply, 189.

revision after expiration of every period of seven years, 37, 190.  
Power Acts, 446.

**VETO,**

of local authority. *See CONSENT.*

**VIBRATION,**

*See NUISANCE.*

some special clauses as to taking "reasonable care to prevent nuisance by vibration," 406, 407, 409, 412.

special clause inserted in Acts of Session 1902 regarding damage by the working of railway within two years from opening, 420.

Lord Rayleigh's committee as to, 1901...428.

their report, January, 1902...428.

special clause inserted in Session 1902, giving larger powers to Board of Trade, 425—426 n.

**VOLT. *See PRESSURE.***

standard of electrical pressure, defined by Order in Council, 293.

limits of accuracy attainable in use of Board of Trade volt standard, 293.

pressure of supply delivered to consumer not to exceed 250 volts, at any pair of terminals, 244, 262.

transforming station or transforming apparatus on consumer's premises may exceed 250 volts, 244.

special provision in regulations under Act of 1888...262.

testing for insulation, testing pressure at least 200 volts, 245, 263.

**VOLTAGE, HIGH,**

when schemes involving plant of exceptional dimensions and, may be sanctioned, 59.

report of Lord Cross's committee thereon, 59.

**W.****WARRANT,**

or summons, several names may be included, 280.

**WASTE OR MISUSE,**

of electricity, 106, 211, 228.

**WATER SUPPLY,**

provisions of Power Acts as to agreements for, 446.

as to laying water pipes, 446.

**WATTS,**

high pressure electric line not to be used for transmission of more than 300,000, except, etc., 149, 246.

in case of aerial line, 50,000...246, 264.

regulations under s. 4 of Act of 1888, high pressure electric line not to transmit more than 100,000...149, 264.

in case of aerial line, 50,000...264.

**WEIGHTS AND MEASURES ACT, 1889,**

Order in Council legalising new denominations of standards for the measurement of electricity, 292.

**WIRES UNDER STREETS, ETC.,**

alteration of, by undertakers where they interfere with exercise of powers of undertakers, 22, 113, 174, 177.

*See further, ALTERATION OF PIPES AND WIRES.*

**WIRING, FREE,**

clause relating to, introduced in a provisional order, 29.

*See FITTINGS.*

**WIRING REGULATIONS. *See under* BYE-LAWS.****WORKMEN'S COMPENSATION ACT, 1897,**

breaking up streets for the purpose of laying water-pipes not a "work" within meaning of, 221 *n.*

**WORKS,**

definition of, in Act of 1882...133.

authority to execute, 101, 165.

security for execution of. *See* SECURITY.

protection of various interests. *See* PROTECTION.

of undertakers on consumer's premises, power to enter and remove, 121.

existing otherwise than under licence, order, or special Act, 147, 148.

notice before commencing, in various cases. *See under* NOTICE.

Ex 9128103  
By F. E.











